

THE LARYNGOSCOPE.

VOL. XXI. ST. LOUIS, FEBRUARY, 1911.

No. 2.

ORIGINAL COMMUNICATIONS.

(Original Communications are received with the understanding
that they are contributed exclusively to THE LARYNGOSCOPE.)

THE PREPARATION AND USE OF THROMBO-KINASE.*

BY L. W. STRONG, M. D., NEW YORK.

For the past three years I have been interested in the study of the control of hemorrhage locally and constitutionally. The work was suggested by a paper of Dr. Weil's, who was the first to use fresh sera, both locally and by injecting them. He found that sera,—heterologous sera as well as homologous,—would control hemorrhage, and he also found that upon the injection of serum the coagulation time of the blood was hastened. Others have used this method with success. Dr. Welch has used human sera, in this city, and I have used them in Boston in a great number of cases. Some of these cases were reported a few years ago in the *Boston Medical and Surgical Journal*.

In some cases there is a certain value in fresh sera used in that way, notably in obstructive jaundice. One of the Mayos has said that these cases invariably bleed. Dr. Munro of Boston used rabbit serum, and his opinion was that he would never operate on a case of obstructive jaundice without using animal serum. But that method is by no means ideal. It is obvious that the subcutaneous introduction of serum for the control of local bleeding is indirect and must work under tremendous dilution, and it became interesting to see if local preparations could not be used. Weil's paper gave the suggestion that serum would control hemorrhage locally.

*Read before the Meeting of the Laryngological Section of the New York Academy of Medicine, December, 1910.

*From the laboratory of the Manhattan Eye, Ear and Throat Hospital.

I thought it would be interesting to take animal extracts from the liver, for instance, and use them locally, in a tamponade of the uterus, for example.

Dr. Batelli (*Compte Rendu, Soc. de Biol.*, 1910), presented a method of preparing a substance from the tissues, which he called thrombo-kinase. That method consisted in extracting the tissue of the lung of the sheep, for instance, with distilled water or salt solution, and then precipitating it with a very weak percentage of acetic acid; then centrifuging the precipitate, evaporating and adding alcohol to preserve it. I found that this method of preparation worked, and some of the men at the Manhattan Eye, Ear, Nose and Throat Hospital used the resultant powder successfully.

I therefore continued with that method, elaborating it and trying to make it more valuable. I have not changed the method very much, however. I found that alcohol did not render it perfectly sterile, which was quite a hitch, as no one wanted to use a non-sterile preparation in the nose or elsewhere; so I tried one per cent thymol, and evaporated the precipitate at a low temperature with the electric fan, and then added an equal bulk of one per cent thymol in alcohol. In order to determine if there was anything specific in the powder, whether it was different from any other foreign body in its effect on coagulation, I conducted a number of experiments, noting the coagulation time with rabbit blood, and I found that I could secure coagulation within forty-five seconds, while the normal time is from three to five minutes. I also used various powders, and found that sometimes these delayed clotting rather than hastening it, and sometimes they had no special effect. So, apparently, here was something specific in its action.

It was a question whether or not to call it thrombo-kinase—whether or not it was a ferment body. I tested that by heating the preparation. I found that it did not lose its power when heated dry, but that when it was moistened and heated with a very moderate degree of heat, 60° C. for thirty minutes it became inactive. Upon that demonstration I based my claim of there being a ferment body in this preparation. I took test tubes covered with a neutral oil in order to make the surface perfectly smooth and make the normal clotting as slow as possible and with a syringe and needle similarly coated I made a cardiac puncture of the rabbit, withdrawing blood from the left ventricle. This is far less of an operation than opening an artery in the neck. Puncturing directly into the heart would be far less likely to liberate thrombo-kinase. I found that I could delay clotting for ten minutes; and with this powder I could produce coagulation in forty-five seconds.

I have not collected any series of cases whatever, but some of the men have used this preparation at the hospital and may report their results with it. Four or five of them have used it and have expressed their satisfaction with its action from a practical standpoint. I gave a little of it to Dr. Green when he was here, and he has written me very favorably about it from Boston.

A few words on the present theories of coagulation: The theory is that the tissue juices from the endothelial cells of the blood-vessels, or broken-down leucocytes, or broken-down platelets, furnish a ferment body which activates the substance known as thrombin. The term fibrin ferment is no longer used—but this activated thrombin attacks fibrinogen and produces fibrin. That is Morawitz's theory of coagulation of the blood, but all authorities do not hold that view. Howell says that we are not justified in assuming the presence of any ferment body, and that there is a prothrombin which is converted into thrombin, which in the presence of lime salts converts fibrinogen into fibrin; but that distinction rests merely on the proof or lack of proof of the ferment body, and I think I have shown the presence of a ferment body in the preparation which I have made.

I took it to Dr. Beebe, for his work on the nucleo-proteids is well known, and his opinion would be of value. He was interested and thought that probably there was a ferment body here—although it might be after all nothing but nucleo-proteid, for he has prepared such and injected them subcutaneously and produced thrombosis in the general circulation—but that is a different matter. Thrombosis is not the same thing as the clotting of the blood. It may occur in a variety of ways. In regard to the possibility of systemic thrombosis, we do not use this preparation subcutaneously—only locally, on the exterior of the wound, so we do not expect from its use any ill effects. Dr. Beebe's idea that it might be only a nucleo-proteid, would not account for its destruction by a slight degree of heat such as this substance requires for its inactivation. So I still hold we have here a ferment body. I have one further hope in regard to it. It has been used in the nose and throat in tonsillar operations. I also hope that it may prove of use in tampons in post-partum hemorrhage; and it may be of value in bleeding mucous surfaces, not in typhoid ulcerations, because it must be applied locally; for the amount that we should administer might not get to the spot; nor would it be of value in hemoptysis—but in other conditions, and in hemophilia, which has been shown to be due to an absence of thrombo-kinase, that would be an ideal condition in

which to use it. I have not been fortunate enough to come upon any cases of hemophilia upon which to try it, but hope that there will be a good use for it.

It keeps very well, and there is no reason why it should not keep in a dry state, for pepsin and any of the enzymes keep in a dry state. That is also an important point for it will probably not deteriorate on being kept.

210 East Sixty-Fourth Street.

Contribution to the Study of Cysts of the Frontal Sinus. HENRI
ABOULKER. *Rev. Hebdom. de Laryngol. d' Otol. et de Rhinol.*,
Oct. 29, 1910.

Aboulker collates 13 cases from which he draws the following conclusions: The etiology of muco-cele is not easy to elucidate. It has been variously attributed to traumatism, infection reaching the sinus, and narrowness of the frontal sinus. Some cases are not explained by any one of these reasons. It appears more simple to attribute these cysts to retention in one of the glands of the sinus mucosa, with cystic dilatation resulting in perforation of the inferior wall of the frontal sinus, or, more rarely, of the septum. Occasionally it causes perforation of the cranial wall.

The symptomatology comprises an obscure period of evolution within the sinus, manifesting itself in vague headaches or neuralgic pains. Later the muco-cele gives more distinct external signs, such as protrusion of the eye and dilation of the base of the nose. The diagnosis before perforation, appears to the author to be impossible except in cases where an intermittent and uni-lateral mucus is discharged.

Aboulker concludes by giving the differential diagnosis of muco-cele from affection of the lacrimal sac, dermoid cyst, fibroma and sarcoma of the internal angle, meningo-cele, sinusitis with abscess and ethmoidal muco-cele.

The treatment is simple. The cyst is exposed and carefully resected and curetted. The wound is allowed to heal by first intention, without external drainage, after a large and complete establishment of a fronto-nasal opening.

W. SCHEPPEGRELL.

A CASE OF TRUE PAPILLOMA OF THE NASAL SEPTUM.*

BY HUBERT ARROWSMITH, M. D., BROOKLYN, N. Y.

In 1897, I reported a case of true papilloma of the nasal septum, which, as far as I could learn, was the twenty-ninth recorded instance of this lesion. In 1901, J. E. Newcomb published the report of a case observed by him, and in *THE LARYNGOSCOPE* of August, 1910, Scarlett, of Philadelphia, describes two cases observed by himself and Packard and mentions two additional cases published by Harris and Wright in 1907 and 1908. These two references I have been unable to verify. This then is the thirty-fifth recorded instance of true papilloma of the nasal septum.

The patient, a girl 12 years of age, was seen at my clinic at the Brooklyn Eye and Ear Hospital on October 19, to-day a week ago. There was a history of slight nasal obstruction on the left side, dating back about one year. There was also some irritation of the nostril which induced the child to pick at the nostril, occasioning slight bleeding and pain. She had also, for several months, been able to feel a small, hard mass within the nostril.

Examination revealed a wart-like growth in the left nostril, just behind the columnar cartilage about three-sixteenths of an inch in diameter and one-eighth of an inch in thickness. It was excised with cutting forceps and its base cauterized with tri-chloroacetic acid.

Dr. Murray, our pathologist, reports as follows:

The growth has a diameter of four mm. and a thickness of two mm., is circular in outline, somewhat flattened and of the cauliflower type. Microscopical examination shows the growth to be divided roughly into an upper and lower half. The upper half consists entirely of corneous, stratified squamous epithelium. The lower half consists of "prickle cells" with a few delicate connective tissue stalks, containing poorly formed blood-vessels. About one-half of the base is necrotic and filled with polymorphonuclear leucocytes. The tumor contains no glands.

Diagnosis: True papilloma of the nasal septum.

170 Clinton Street.

*Read before the Meeting of the Laryngological Section of the New York Academy of Medicine, October 26, 1910.

SUBMUCOUS RESECTION FOR THE CORRECTION OF SEPTUM DEFLECTIONS WITH A DESCRIPTION OF THE AUTHOR'S SPECIAL INSTRUMENTS.*

BY MYRON METZENBAUM, M. D., CLEVELAND.

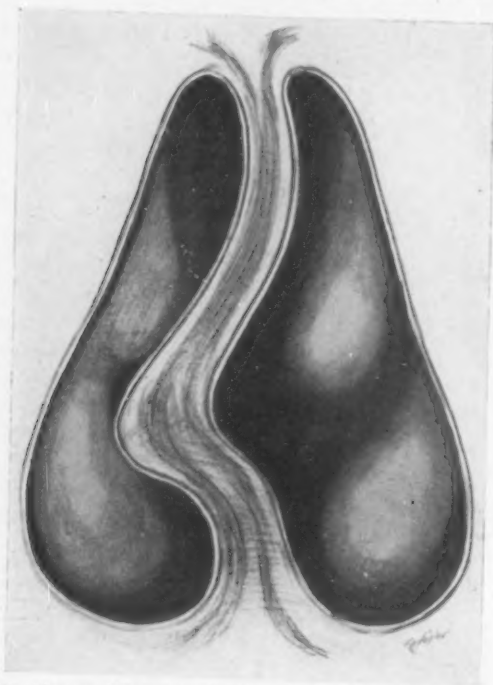
In the formation of the upper jaw the two bony halves unite before the cartilaginous septum is developed. This part of the septum seems to exhibit a certain amount of growth in itself so that when the palatal arch is high or Gothic in form the nasal floor remains high, forcing the flexible septum to bulge or curve into one or both nares in order to obtain its full degree of growth. This may account for a large number of purely cartilaginous deflections. The dislocation of the cartilage at the tip of the nose is always due to injury. Injury, on the other hand, accounts for many of the deflections of the bony portion of the septum, which are either the result of dislocation or callous formation at the seat of fracture of the nasal or septal bones. The largest bony spurs are formed at the area of juncture of the perpendicular plate of the ethmoid, with the posterior projecting portion of the triangular cartilage and the vomer.

Deflections of the septum producing nasal obstruction may be wholly cartilaginous or bony, or a combination of both, and may be located anywhere along the septum, anteriorly, posteriorly, or where it joins the nasal ridge. Many deflections show external deformities, as displacement of the nose from the median line, flattening or widening at the bridge or lateral bulging. Some marked deflections permit of almost perfect breathing; most of them, however, interfere with the free ingress and egress of air through at least one nostril and at times cause intermittent closing of the other nostril. Such a condition naturally forces the person to breathe to a greater or lesser degree through the mouth.

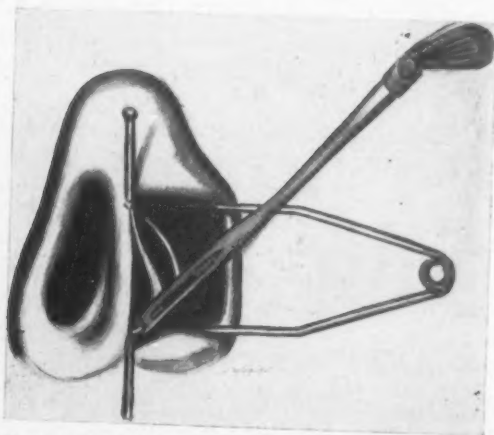
Such an obstruction interferes with the normal ventilation of the nasal chambers, of the middle-ear through the Eustachian tube, and of the maxillary, frontal, sphenoidal and ethmoidal cells through their openings into the nose. The obstruction prevents the normal drainage of the nose so that the mucus can be expelled only by force through the narrowed side or may cling to the projecting ridges un-

*Read before the Clinical and Pathological Section of the Academy of Medicine of Cleveland, December 2, 1910.

Editor's Note.—By consent, this article appears simultaneously in the Cleveland Medical Journal.



Cross-section of nose showing marked deflection of cartilaginous septum.



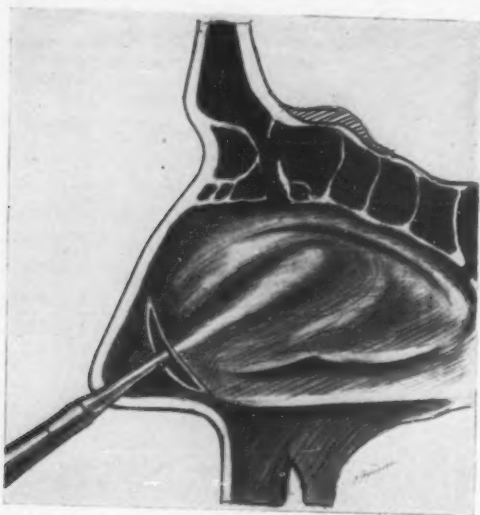
Author's septal chisel in position to engage bony ridge.

til drawn through the mouth. Upon lying down the mucous will gravitate into the throat. The irritation of retained mucous secretion may result in a catarrh of the mucous membrane. During a period of an "acute cold in the head" the retained mucous may become purulent and the infection extending through the normal openings to the accessory nasal sinuses may be the direct cause of an empyema of the maxillary, frontal, sphenoidal or ethmoidal cells.

When the deflection is in close proximity to the inferior or middle turbinate, during periods of colds or congestion, these erectile bodies will impinge upon the deflection, producing a stuffiness or complete obstruction to nasal breathing on one or both sides, accompanied by a fulness or pain between the eyes. An angular deflection may be of so marked a degree as to be imbedded into the antrum wall or into the inferior or middle turbinate bodies, interfering with or destroying their useful function. Foreign substances clinging to the septal deflection frequently cause an irritation resulting in an ulceration, followed by hemorrhages, or the irritation of the foreign substance may precipitate attacks simulating hay-fever. Marked obstructions may result in a reflex asthma.

When a saw is used to remove bony spurs or deflections the mucous membrane is destroyed at the same time; if a cartilaginous deflection be sawed through a permanent perforation of the septum follows. On the contrary if the mucous membrane be first lifted, the deflection removed and the mucosa replaced, no denuded surface or perforation results. By analogy this operative procedure is similar to a laparotomy, in which the abdomen is opened, the diseased organs removed and the abdominal walls reclosed to protect the operated field without leaving any raw surface or permanent opening.

According to the writer's investigation and clinical experience (as fully noted in the *Ohio State Medical Journal*, Dec., 1910), if a one-hundredth grain of hyoscin hydrobromid, or scopolamin, which is the same, be given by mouth one-half hour before the operation it will prevent psychical fear, will allay considerable pain, will act as an anodyne for several hours after the operation, and will render it possible to secure complete surgical anesthesia of the mucous membrane of the nares with a two per cent, as against a ten to fifty per cent solution or the use of crystals of cocain. By checking the glandular activity it prevents a too rapid absorption of cocain and by its action on the cardiac heart ganglia it safeguards the heart against the toxic effects of the latter. Its inhibitory action



Median section showing Hajek-Ballenger elevator separating the mucopericondrium, (Freer).



Author's septal chisel.



Author's posterior septal knife.

on the vagus and its branches eliminates the possibility of reflex stimuli coming through this channel and interfering with the heart action.

The operation is performed better under cocain than under a general anesthetic with the patient in either a sitting or reclining posture. Both sides of the septum are plastered with pledgets of cotton saturated with a two per cent cocain in a 1-10,000 adrenalin solution. These pledgets are renewed two or three times in a period of ten minutes, by which time anesthesia and hemostasis are complete. The operation may be performed from either the convex or concave side; many prefer operating from their own right side. However, since the tip of the nose is flexible and the cartilaginous deflection often likewise flexible, the operation can be undertaken from either nostril.

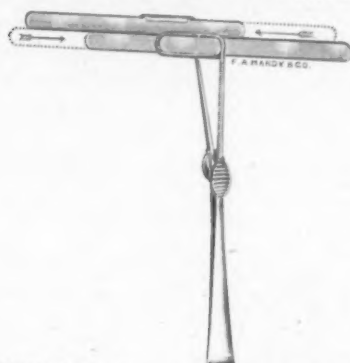
Technic: An incision is made just anterior to the cartilaginous deflection, through the mucous membrane and perichondrium and as high up as necessary, always retaining sufficient cartilage so as not to weaken the nasal bridge. The incision is brought downward to the base of the deflection, which in some cases must be as low as the inferior level of the nasal crest or ridge. A blunt dissector is introduced through this incision at its upper angle between the perichondrium and the cartilage. At this point it can be passed straight backwards, for here the perichondrium separates most readily from the cartilage. The dissector is then pressed firmly downward against the deflection in such a manner as if trying to straighten it out, freeing the membrane to the very base of the deflection. The separation is continued posteriorly over the cartilaginous or bony septum somewhat beyond the posterior border.

With a guiding finger in the opposite nostril an incision is made through the cartilage one-fourth to one-third inch posterior to the original incision, so as to safeguard against a possible perforation of the mucous membranes in the same line. The blunt dissector is now passed between the cartilage and perichondrium and the mucous membrane is separated in a similar manner as on the first side.

A septum speculum is introduced spreading the mucous membrane on both sides away from the septum. If the deflection be limited to the cartilage a Freer angular knife may be used in its removal, or the Ballenger swivel knife, which engages the cartilage at its upper angle, passes backwards, rotates downwards and is drawn out forwards, removing the cartilage in one piece. If the deflection takes in the posterior bony parts or the bony floor, these are then removed in pieces by the biting forceps of various types.



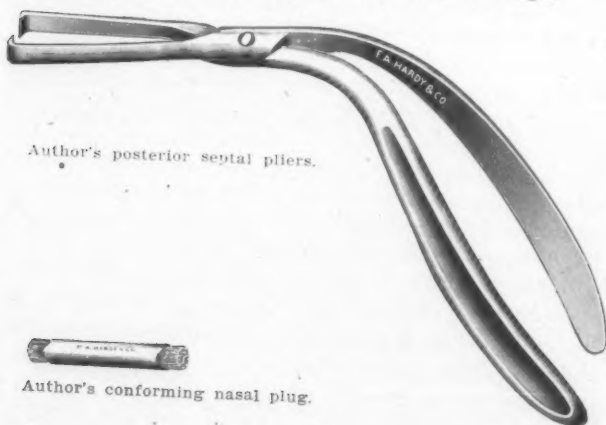
Author's flexible retractor. Can be shaped and bent for each case. When bent like a trough it will retract to the very base of the deflection.



Author's adjustable flexible septal speculum. Blades can be adjusted and bent to conform around deflection.



Author's flexible mucous membrane retractor. Made of flexible material and can be readily bent to any desired angle.



Author's posterior septal pliers.



Author's conforming nasal plug.

By aid of the author's septal chisel the cartilage and bony crest or ridge of the floor can always be removed in one piece, and often the cartilage, bony crest and posterior bony deflection can be readily removed in one entire piece without bruising the tissues. By aid of the chisel the operating time is reduced to twelve or fifteen minutes as against one to one and a half hours, as reported by many operators. The chisel, one-quarter inch wide, is half curved with a sharp cutting-edge set back one-eighth inch and protected on either side by two dull projecting points to prevent the mucous membrane from being caught. It has a long fenestration in which the cartilage may ride.

F. A. HARDY, M.D.

Author's flexible submucous elevator.



a. Ethmoid or posterior bony septum; b. cartilage; c. bony spur projecting one-half inch; embedded into lateral wall; d. bony ridge.

Large bony septal spur and deflection embedded into antral wall, composed of part of cartilaginous septum, bony ridge and posterior bony portion of septum, removed by author's septal chisel. Submucous.

The chisel engaging the upper angle of the septum is pressed straight back, cutting the cartilage; then, with firmer pressure or by gentle blows from a mallet, it is made to penetrate the upper border of the bony deflection. It is then withdrawn and introduced at the lowermost angle of the nasal crest below the deflection and by slight blows driven back until it has passed the posterior angle.

The portion of the septum to be removed being severed above and below, a slight twist of the chisel usually fractures the posterior border. If this does not occur then either the writer's pos-

terior cutting-forceps or posterior angular knife is introduced and this border is readily cut through.

The two mucous surfaces now come in contact with each other. Then one or two of the writer's nasal conforming drainage plugs, consisting of silk rubber-tubing packed with sterile gauze, are inserted into the operated nostril pressing the mucous surfaces in contact with each other. The serum soon swells the plugs, conforming them to the nasal chamber, thereby exerting sufficient pressure to prevent post-operative bleeding.

Effective cauterization or partial resection of the turbinate bodies may be followed by atrophy. Exenteration, or the complete removal of the inferior turbinate destroys the vital functioning organ of the nose.

The submucous resection of the deflected septum is a definite surgical procedure, removing the pathological obstruction, permitting the turbinates to perform their function, relieving pressure-congestion, restoring a normal patency to the nares, providing free anterior drainage for the mucus and establishing free ventilation to the accessory nasal sinuses.

766 Rose Building.

Foreign Bodies in the Naso-Pharynx. E. J. MOURE. *Rev. Hebdom. de Laryngol. d'Otol. et de Rhinol.*, May 7, 1910.

Foreign bodies may find their way into the naso-pharynx during the act of vomiting, although the foreign body is more apt to lodge in the posterior nasal cavity than in the naso-pharynx. These become encrusted with calcareous matter eventually causing great irritation. In one case, a tampon of gauze, which was used to arrest an epistaxis, was forgotten near the choanal orifice and became attached to the vomer. This caused irritation and a sanious and finally fetid discharge. The ignorance of the cause may result in an error of diagnosis and even give rise to a suspicion of malignancy.

Foreign bodies are sometimes pushed into the naso-pharynx in an effort to clear the lower part of the throat of a foreign body.

SCHEPPEGRELL.

**TRANSPLANTATION OF BONE FOR THE CORRECTION OF
DEPRESSED DEFORMITIES OF THE NOSE, WITH
REPORT OF CASES.* (Abstracted).**

BY WILLIAM WESLEY CARTER, M. D., NEW YORK.

In his introductory remarks, Dr. Carter recalled the cases which he had shown at the previous meeting of the Section. He stated that the results were just as perfect as they were a month ago. He thought it sufficient, in order to refresh the memory of his hearers, to show the casts, photographs and X-ray plates of the cases, and did not think it necessary to make the patients report for inspection again.

The scope of the paper did not admit of a discussion of the fundamental principles of bone-transplantation in the human body, since it was intended purely as a report on a method that he had used in the treatment of three cases of depressed deformity of the nose from the clinic of Dr. Harmon Smith at the Manhattan Eye, Ear and Throat Hospital.

Most of the work done in this field of surgery has had for its object the supplying of deficiencies in the long bones and the bones of the skull, while little has been said about the introduction of bone into the soft tissues where the conditions for its nourishment and growth must differ widely from the former.

(1) The autoplasmic operation, i. e., the transference of bone from one part of the body to another, is the ideal method and gives the quickest and best results. (2) The homo-plastic, i. e., from one animal to another of the same species, is frequently successful. (3) The hetero-plastic, i. e., from one animal to another of a different species is unsuccessful.

There is considerable difference of opinion as to the fate of the transplanted tissue, the majority of writers believing that all transplanted bone is resorbed and is replaced by a new growth of bone from the periosteum. This belief, however, is held chiefly by those who have done the homo-plastic operation, and their observations throw little light upon the fate of the bone in Dr. Carter's cases; for in these each patient furnished his own bone for transplantation.

*Read before the Meeting of the Laryngological Section of the New York Academy of Medicine, December 28, 1910.

Dr. Carter divides depressed deformities of the nose into two classes: (1) Cases without loss of bony tissue. (2) Those in which a large part of the bony framework of the nose has been destroyed.

Cases of the first class are amenable to Dr. Carter's bridge-splint operation, which he has already described, and which he has used satisfactorily in about forty cases. But the *second* class as he stated in his first presentation of the subject several years ago, cannot be relieved by this method, as the bridge-splint operation depends upon the presence of bone tissue in the nose to retain it in the corrected position after the removal of the bridge.

Each of the cases reported had a depressed deformity due to traumatism, and each had suffered considerable loss of bony framework.

Dr. Carter believes that in the transposition of bone from one part of the body to another, the transplanted tissue receives only a temporary injury and that it continues to live and takes part in the process of repair in its new position in the nose.

The rib is selected because it is easily removed, and the piece can be easily shaped to suit the deformity. The patient suffers little or no discomfort as the deficiency is quickly filled in by the periosteum. Furthermore, the rib is well adapted for transplantation because it is so well supplied with minute nutrient foramina.

The periosteum is removed from the grafts because: (1) It is easier to resect a rib without injuring the pleura, by shelling it out of its periosteum, and besides, it is desirable to leave the periosteum for the reconstruction of the rib. (2) The bare bone is more quickly and surely nourished by the connective tissue envelope which quickly surround it. (3) The osteogenetic layer of the periosteum can be dispensed with since we have no desire to grow bone, but only to nourish the transplanted tissue.

The operation is essentially the same in all three cases: The nose and the right side of the chest are prepared for an aseptic operation. A transverse incision is made over the naso-frontal suture, and through this the skin and subcutaneous tissue are elevated over the dorsum of the nose with a long, thin, two-edged knife, curved on the flat. Above the incision, the tissues, including the periosteum are elevated for about three-eighths of an inch over the naso-frontal process. About two inches of the ninth rib at about its middle are then shelled out of its periosteum and removed. This piece is then split in its transverse diameter, the medullary tissue is scraped off, and one of the strips of compact bone is shaped to suit the deformity. This is inserted into the wound previously made

in the nose; one end reaching well down to the tip, and the other being placed under the periosteum over the naso-frontal process. The wounds are closed with fine silk, and sterile dressings applied.

Case 1. A little girl, fell and fractured her nose when she was 2 years old. The nose was flat and broad, and on examination, no nasal bones could be demonstrated. After the operation, which was done on June 21, 1910, the profile was almost perfect and has remained so.

Case 2. A woman, 25 years old, fractured her nose when she was 7 years of age. The injury was followed by a septal abscess.



H. C. W., injured in railroad accident; (before operation).



H. C. W., injured in railroad accident; (after operation).

Later the nose became badly deformed, the bridge being flattened and concave. The operation was performed on June 25, 1910. Two pieces of bone had to be super-imposed. The result was highly satisfactory. The X-ray plate shows the bones in position, and intersutural union seems to have occurred between the two transplanted fragments.

Case 3. A man 45 years of age was injured by a train on December 14, 1908. His nose was almost torn off. Following the injury, erysipelas developed and all of the bony structure of the nose sloughed out. The bridge of the nose was badly depressed and

flattened and scar-tissue bound the skin to the subjacent tissues. It was one of the worst cases of deformity that Dr. Carter has ever seen. After the operation, which was done on October 20, 1910, the profile of the nose was almost perfect and has remained so.

Dr. Carter showed photographs, casts and X-ray plates of his cases. He believes that a large proportion of those cases of deformity that have been considered hopeless can be cured by this method of treatment, which is far superior to all methods involving the introduction of foreign bodies into the tissues.

69 West Fiftieth Street.

Tuberculosis of the Lip. GEORGE E. ARMSTRONG. *Ann. of Surg.*, April, 1910.

A man, aged 55 years, presented an ulcerated area on the left side of his lower lip. It had first appeared fourteen months before the author saw him. One sub-mental and one sub-maxillary gland were enlarged. He suffered from pulmonary phthisis. The ulcer and glands were removed and submitted to pathological examination. They were found to be tuberculous. The author refers to somewhat similar cases reported respectively by Volkmann and Schuchardt.

PACKARD.

An Improved Pharyngoscope. AUGUST L. BECK, *Med. Record*, Sept. 17, 1910.

This instrument is a modification of the Hays pharyngoscope. It is smaller in construction, having one tube for carrying wires to the lamp, and one tube for the telescope. The tube has a wider diameter, or bore, than any yet made. No handle is attached, for easier manipulation. The description of the instrument is illustrated.

The Wappler Electric Company manufacture the new modification.

SARCOMA OF THE NASAL WALL OF THE MAXILLARY ANTRUM.*

BY O. T. FREER, M. D., CHICAGO.

In August, 1908, the patient, then a woman of 40, noticed an increasing obstruction in the left nostril. The occlusion soon became complete and was associated with repeated severe nose-bleed, and, when I first saw her, in December, 1908, the condition was associated with an intensely fetid breath. Inspection of the naris showed it apparently filled with mucous polypi, but when the anterior ones of these were removed, a deep pink lobulated growth appeared, farther back in the nostril, which bled when touched. By posterior rhinoscopy the naso-pharynx was seen to be quite filled by a gray, sloughing tumor, which proved to be the source of the stench. The intra-nasal growth and its post-nasal extension were removed with the per-nasal forceps I employ for taking away adenoid vegetations through the nose and which I have described in the *Annals of Otology*, 1906.

While the removal of the growth produced severe hemorrhage, it could be taken away so rapidly with this forceps, including the post-nasal mass, that the total loss of blood was not great, for as soon as the healthy base of the tumor was reached the bleeding ceased. It would have been impossible to work as quickly or thoroughly with post-nasal forceps as with the per-nasal ones, or as intelligently, for the use of the index-finger as a guide in the naso-pharynx accurately led the per-nasal forceps to the portions of the neoplasm which it grasped. In addition the per-nasal forceps was employed to clear out the interior of the naris as well as the naso-pharynx, so that this one instrument served for the whole procedure.

It was found that all of the turbinated bodies and the ethmoid cells upon the affected side had disappeared into the growth by absorption and softening, so that the operation made a large cavity of the left naris.

Within a few weeks the tumor returned in the nasal wall of the antrum and this too had to be removed in a second operation, so that the maxillary antrum became one cavity with the nasal fossa.

*Read before the Meeting of the Chicago Laryngological and Otological Society, May 17, 1910.

There were other minor relapses, so that six operations in all were needed, the last recurrence appearing in the outer wall of the antrum and being cleaned off with the Grünwald nasal curettes, the Grünwald punch, and the Rhodes tonsil punch.

Since this last removal, in September, 1909, there has been no return of the neoplasm and the woman has remained in perfect health.

In all of the operations, large portions of the growth were found necrotic, a condition evidently due to a tendency of the tumor to shut off its own circulation by degeneration of its vessels. Repeated microtome sections were made which also showed extensive necrosed areas, so that it was difficult to find enough living tissue for a histologic diagnosis. This was finally made for me, through the kindness of Dr. George Shambaugh, in the laboratories of the University of Chicago, the conclusion reached being that the tumor was a mixed sarcoma, mainly of the round-celled type, with some spindle cells.

This tendency to speedy degeneration of some sarcomata is well known and is shown by the influence of erysipelas in causing degeneration and absorption of these growths.

The history of this case shows that the rapid removal of a nasal sarcoma with the per-nasal forceps makes the bleeding negligible, as it will be sure to be arrested when the base of the growth is reached.

There is no doubt that the general surgeon would have attempted to remove this tumor by approaching it from without by a resection of the upper jaw and the favorable result in this case is another proof that rhinology can accomplish intra-nasally at least as much as can be done by such formidable procedures.

It is only in exceptional instances, where a round-celled sarcoma has not its usual malignancy that such a favorable result, as was obtained in this case, may be expected. A number of other intra-nasal sarcomata which I have seen and which originated in the same locality in the nose, were so exceedingly malignant and recurred so rapidly that they were perfectly uncontrollable. It is well known that the variation in the malignancy of sarcomata is far greater than in carcinomata.

A CASE OF CHRONIC PROGRESSIVE BULBAR PARALYSIS.*

BY R. H. GOOD, M. D., CHICAGO.

Mrs. R. M. G., widow, aged 50, came to my office, November 10, 1909, with the following history: During August, 1909, she began to have some difficulty in speech, and became easily fatigued on using her voice at length. She also complained of a feeling of fullness and difficulty in swallowing and breathing.

Her condition gradually became worse, and on November 10, 1909, I obtained the following: Family history negative, always enjoyed perfect health. Has had no children and no miscarriages. At this time she could not articulate distinctly, yet one could understand what she was saying. There was some difficulty in breathing, becoming readily fatigued on using the voice. Liquids would occasionally pass into the nose on swallowing. She was seized with coughing-spells at meal-times when swallowing solid food. The lips could not constantly be kept closed so that there was a dribbling of saliva.

On examination the mouth appeared large and the lips thinner than normal. The tongue could be protruded with difficulty, the surface showed folds or depressions, and there was a constant tremor of the muscles of the tongue. The patient could not lift her tongue up to the hard palate. The senses of taste, touch, and pharyngeal reflex were present. The soft palate moved sluggishly. The larynx appeared normal but the muscular movements seemed to be impaired.

The deltoid muscle as well as the muscles of the hand were weakened. The pharynx and hypo-pharynx eminences were flabby and flattened and the inter-corporeal muscles showed signs of atrophy.

The reflexes of the arms and legs were somewhat exaggerated; sphincters not disturbed. Patient has had a chronic catarrhal otitis media for the past 15 years, but has observed no special progress during the past year. Vision normal and fundus findings negative.

Cerebration normal. Nerves involved were facial, hypo-glossal, glosso-pharyngeal, pneumogastric and the upper spinal, all of which

*Read before the Meeting of the Chicago Laryngological and Otological Society, May 17, 1910.

have their motor nuclei in the medulla and anterior horns of the spinal cord.

The patient has gradually become worse until at the present time, March, 1910, she is unable to take solid food and even has choking and coughing spells when swallowing liquids. Her breathing is labored and she frequently wakes up during the night with smothering sensations. The intensity of her voice is diminished, the pitch lowered, and her articulations cannot be understood.

The onset of the disease was gradual, the involvement bilateral and the disease slowly progressive. No symptoms of brain tumor; Wassermann negative. Potassium iodide of no benefit so that we have here a clear case of degeneration of the motor nuclei in the medulla.

72 Madison Street.

Neurasthenic Conditions Referable to the Nose and Throat. W.

H. JAMIESON, *Montreal Med. Jour.*, Aug., 1910.

The writer finds it a matter of surprise that although catarrhal and other symptoms of the nose and throat are commonly complained of by those suffering from neurasthenia, little attention is given to these manifestations in the literature of this affection. Because a patient is known to be neurotic, one is apt to regard his complaints too lightly, and overlook some apparently trivial condition which may be a true source of discomfort to a naturally nervous organism.

According to the writer, the neurasthenic conditions referable to the nose and naso-pharynx, are headache in the occipital or frontal region; pain or tightness at the root of the nose; rhinorrhea; mental dullness or asthenia; epistaxis and marked turbinal congestion; and neuroses of olfaction. Among those referable to the pharynx are lump in the throat, functional or due to anesthetic areas; and dryness or soreness of the throat. In connection with the larynx the conditions are aphonia; nervous cough; laryngeal apoplexy, and perhaps bilateral abductor paralysis.

WISHART.

AN UNUSUAL CASE OF PAPILLOMA OF THE LARYNX.*

BY WILLIAM WESLEY CARTER, M. D., NEW YORK.

Mr. Chairman and Gentlemen: This case seems to me to present a sufficient number of interesting features to be worthy of your attention. The patient is a man 47 years of age. His father died with tuberculosis. His mother is living and well.

He was born and raised in Asheville, N. C., where he lived an out-of-door life. He had measles and pertussis in early childhood and typhoid fever seven years ago; there is no history of venereal disease. When a child, he was subject to frequent attacks of croup; during these attacks he would always become cyanosed, on several of these occasions he came near dying from suffocation. When very young he had numerous warts on his hands.

When he was 5 years of age, he became hoarse and within two or three months lost his voice completely; since this time he has never been able to speak above a whisper. At times he suffered somewhat with dyspnea and he has never been able to take any violent exercise without experiencing difficulty in breathing. Whenever he coughed violently he would expectorate small masses having the appearance of cauliflower. His inspiratory efforts were always difficult and attended by a wheezing sound. His case was diagnosed as asthma and he was treated for this affection for a number of years. He was never examined by a laryngologist until three years ago, when the growths in his larynx were discovered but no treatment was given. In this case, therefore, we may safely say that the affection began in early infancy and pursued its natural course up to the age of 47 years, undisturbed by treatment of any kind. During the past two months he has suffered terribly from dyspnea, has been unable to lie down and says that he has not slept a wink in a month. He has recently lost twenty-seven pounds in weight.

I was called to see the patient at midnight on September 6. I found him walking around the room in great distress and having that anxious expression characteristic of air-hunger. He was greatly emaciated and presented the appearance of a phthisical subject.

Examination of the larynx showed it to be almost completely blocked by fungoid papillomatous masses, the largest of which, at-

*Read before the Meeting of the Laryngeal Section of the New York Academy of Medicine, October 26, 1910.

tached to the left side of the larynx, acted like a ball-valve and caused almost complete obstruction on inspiration. The edematous condition of the surrounding tissues gave one the impression of an active inflammatory process. The heart and lungs were normal. His family physician, Dr. Carl V. Reynolds, of Asheville, N. C., agreed with me that he should be placed at once in a hospital; so he was transferred to the Manhattan Eye, Ear and Throat Hospital. For the urgent symptoms an adrenalin spray and steam inhalations were prescribed.

The next day I removed with a Sajous snare the large growth from the left cord. This gave him instant relief from the dyspnea and on the following day the edema had sufficiently subsided for me to locate the other growths. These seemed to spring from every part of the larynx. There was one in the anterior commissure and one in a still more unusual location, the posterior commissure.

Operating every third or fourth day, I removed, endo-laryngeally, all of these growths with the snare, with the exception of those in the commissures. These were removed with the Krause forceps. The bases of the growths were touched with the electro-cautery. A solution containing equal parts of a twenty per cent cocaine and one one-thousandth adrenalin was freely applied before each operation. The satisfactory manner in which these growths were removed with the snare leads me to believe that they were all pedunculated, though the pedicles could not be distinguished in the mirror. All of the specimens were examined by Dr. Jonathan Wright, who pronounced them papillomata.

After the operations the patient experienced no further difficulty in breathing, and during his stay of one month in the hospital gained sixteen pounds in weight.

The voice as yet, has not been regained, nor would an early recovery of this be expected, since the obstruction had existed so long, and the fibrosis especially in the inter-arytenoid area is extensive.

The most interesting features of this case are: It gives the natural progress of papilloma of the larynx beginning in infancy and continuing undisturbed by treatment up to the age of 47 years. 2. The very unusual fungoid appearance of the growth, (as far as I can discover, no case like it has been recorded). 3. The subsequent history will also be of interest, whether he develops a speaking voice and whether there is a recurrence of the growth. The latter, we believe, is unlikely, as the growths were thoroughly removed and the patient has passed that age when there is a tendency to warty

developments. 4. It is also worthy of mention that these extensive growths were all removed endo-laryngeally, a procedure the feasibility of which was doubted by one of our distinguished New York laryngologists, Dr. J. W. Gleitsmann, who saw the case before I did.

I regard the endo-laryngeal operation as the ideal one in these cases, and can scarcely conceive of a case of papilloma of the larynx justifying thyrotomy. In operating, I prefer the snare to any other instrument for the reason that the growth can be removed more accurately, more thoroughly and with far less injury to the surrounding healthy parts. The latter is most important, for it is the common observation of laryngologists that recurrences are more apt to spring from those portions of the larynx that have been injured during the operative procedures than from the bases of the primary growths.

In conclusion I wish to state that the gentleman to whom I referred as having seen the case, Dr. Gleitsmann called up just before I left home and expressed regret at not being able to attend the meeting. He desired me to state to the Section that this was one of the most unusual cases of papilloma of the larynx he had ever seen, and that he had not seen a case of fungoid papilloma of the larynx for several years. Personally, he considered it a case for thyrotomy, and expressed much satisfaction that the growth had been removed by endo-laryngeal means.

The Sajous snare is preferable in these cases, for in removing the growth from the larynx the wire loop presses against the groove on the tip and holds the papilloma, preventing it from falling into the trachea. The growths in the commissures were removed by means of the Krause laryngeal cutting-forceps.

69 West Fiftieth Street.

Acute Otitis Media—Its Causes and Treatment. R. EVATT MATHERS, *Maritime Med. News*, Sept., 1910.

The writer condemns the use of unsterilized oils, laudanum, onion cores, etc., as possessing no therapeutic value, and being favorable to bacterial growth. Moist heat is also condemned as softening the tissues and hastening local necrosis. WISHART.

"FATAL CASE OF QUINSY IN AN ADULT."

BY S. W. PROWSE, M. D., WINNIPEG, MAN.

The report of Dr. J. J. Thomson's case under the above title in the December issue of THE LARYNGOSCOPE recalls to my mind a somewhat similar case at whose bedside I arrived like Dr. Thomson, only to find the patient dead.

The patient, a man aged 38, a commercial traveller, was seized with "sore throat" in the City of Regina, Saskatchewan, in September, 1899. He continued at work for three days when, contrary to the advice of the physician whom he consulted, he took a train for his home city, Winnipeg—a journey of some fourteen hours, during which the ordinary symptoms of quinsy grew progressively more severe. On arrival at his destination, the patient was able, assisted by his business partner and another friend, to walk to a cab in which he was rapidly driven to his partner's home, a distance of about a mile. As the cab passed my office, one of his companions alighted and engaged another cab in which he summoned me to join him "to attend a man who was choking to death." We arrived at the house just as the corpse had been carried from the cab. Unlike the case of Dr. Thomson's, this patient's death had been preceded by violent struggling for air and clutching at the throat while in the cab, and the post-mortem which we were fortunately able to obtain, disclosed, as expected, that death had been due to *edema glottidis* hastened, no doubt, by the exertion of walking from the train to the street, and that an intubation or laryngotomy performed at the station would probably have saved the patient's life.

The quinsy was a double one, the abscesses extending far down the neck, practically enveloping the whole larynx laterally and anteriorly; the characteristic doughy swelling was quite evident before the section was begun, and there had been no rupture of the abscess into the air-passages.

706 Union Bank Building.

NEW INSTRUMENTS.*

BY J. J. SULLIVAN, JR., M. D., SCRANTON, PA.

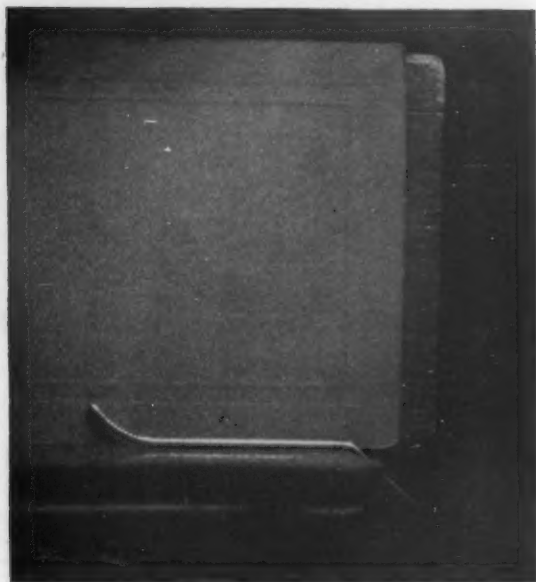
ANTRUM AND FRONTAL SINUS TRANS-ILLUMINATOR: It is small, compact and easily sterilized. Gives varying degrees of light that will trans-illuminate the thinnest to the thickest skull. (See cut.)

METHOD OF USE: Attach lamp-cords to any suitable rheostat. Use a sixteen candle-power bulb for reducing current. My rheostat is divided in points from one to ten. The antrum lamp is placed in the mouth and I commence at the lowest point on the rheostat, increasing until I get full illumination of both antri. In this way I am able to note the difference in appearance by comparison. Example: Point 7 on rheostat gives an illumined left antrum and a darkened right antrum, whereas if we go to point 10 and the patient is thin-skulled the intense light may show through the pus. I have seen this happen in the use of a Pynchon light. Having no means of reducing power, both sides showed up bright whereas, with the small lamp I use, we can get varying degrees of light-intensity. If I find, by the trans-illuminator, that the right antrum is probably diseased, the patient is then placed in the Escats position,—head well down between the knees, suspected side up—for two minutes. If I find no pus and there are no symptoms of retention, i. e., pain over antrum or forehead, we are dealing with thickened mucous membrane or some other anomaly. In other words, without symptoms, even with a darkened antrum, I do not explore.

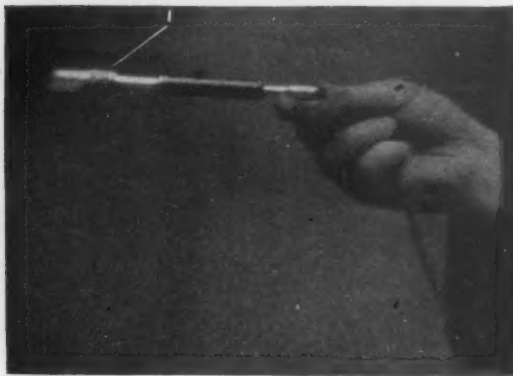
As to sterilization—the glass cap (see cut) that fits over the lamp can be washed in alcohol or other suitable antiseptic solution. The metal shank of the lamp is covered with a piece of sterile gauze before placing in the mouth.

TRANS-ILLUMINATION OF THE FRONTAL SINUS: 1. The frontal sinus attachment is placed on the lamp; 2. full illumination; 3. note the various dimensions of the frontal sinus, gradually decreasing the light intensity for comparison. If frontal sinus trouble is suspected, I have an X-ray plate taken. After seeing the plate I again trans-illuminate the sinuses and mark out the parts illumined. I then compare the pencil markings on the patient with the plate. This has proven a very valuable means of diagnosis for me. The miniature

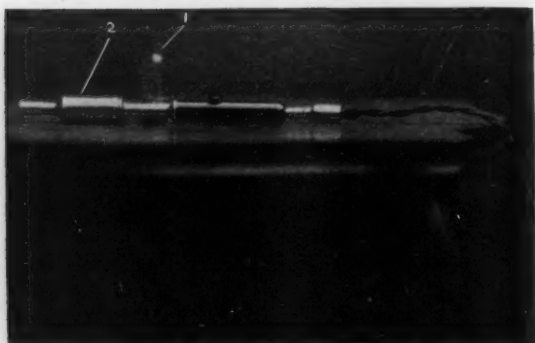
*Read before the Luzerne and Lackawanna County Dental Society, June, 1910.



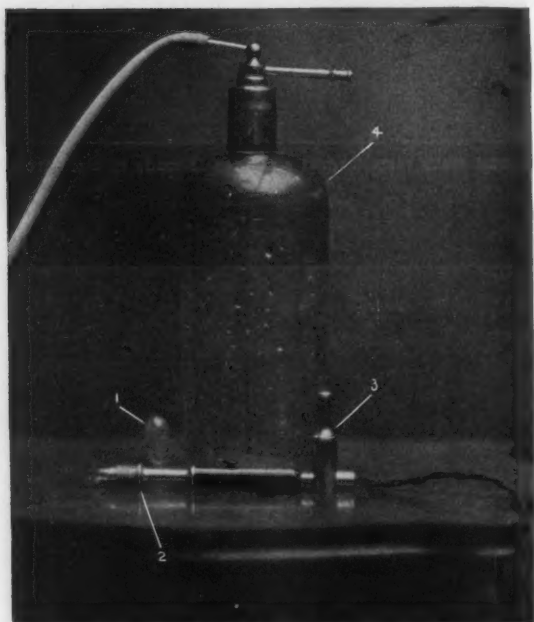
Frontal sinus rasp, largest size rasp is made in sizes from 1-6.



1. Antrum attachment ready for use. 2. Antrum attachment.

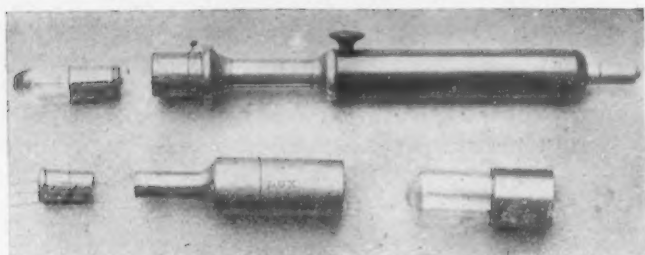
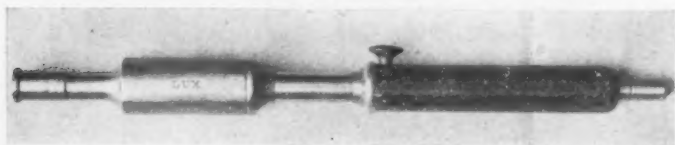


1. Lamp ready for frontal sinus.



1. Antrum attachment. 3. Frontal sinus attachment.
2. Transilluminator showing bulb. 4. Irrigator.

electric bulb used on the lamp has a very heavy filament that rarely burns out if a sixteen-power globe is used for reducing. I spent over three months trying to get a lamp that would give the service of these miniature bulbs—then burned out one hundred or more bulbs to get their life point and I find that these bulbs will give prolonged service with sufficient intensity of light, if no higher than sixteen-power globe be attached to the rheostat. Then again, if you



wish to conserve the life of your lamp you should start low on the rheostat and gradually get your intensity of light rather than putting on full power, point 10, before pressing button for contact. It is a cold lamp and gives off little or no heat.

COMPRESSED AIR IRRIGATOR: This is an enlarged De Vilbiss atomizer holding one quart. I use it chiefly for washing out the antrum of Highmore. Usually a pressure of from five to ten pounds is all that is required for a steady stream (see cut).

SPECIAL EDITORIAL DEPARTMENT

THE DEAF

**Their Education—Improvement of Conditions—
Responsibilities and Participation of the Profession**

EDITED BY

JOHN DUTTON WRIGHT, M. A.
DIRECTOR OF THE WRIGHT ORAL SCHOOL FOR THE DEAF
NEW YORK CITY

"The problems of deafness are deeper and more complex, if not more important, than those of blindness. Deafness is a much worse misfortune for it means the loss of the most vital stimulus—the sound of the voice, that brings language, sets thought astir, and keeps us in the intellectual company of man."

Helen Keller to Dr. James Kerr Love, Glasgow, April, 1910.

The aim of this department of **THE LARYNGOSCOPE** will be to bring to the notice of its readers from month to month, facts that may be helpful to physician and patient in dealing with the life-problems involved in deafness. Suggestions from readers will be gladly received and all questions answered to the best of our ability.

In Birmingham, England, according to the *British Deaf Times*, the Birmingham Education Committee has established evening classes in lip-reading for men and women between the ages of 16 and 40, who were able to hear earlier in life, but have become totally or extremely deaf. The head teacher of one of the Birmingham Day Schools for the Deaf is in charge of the classes, and she has two assistants who teach on alternate evenings, in order that the students may have the opportunity of practicing lip-reading from different individuals. It would be an excellent thing if the education-committees of our American cities would adopt this plan. An influential aurist in any community could do much toward bringing about the establishment of such classes.

Dr. James Kerr Love, an aural surgeon of Glasgow, Scotland, who is also well known in this country and an Honorary Member of the American Laryngological, Rhinological and Otological Society, sends us a circular of information concerning the establish-

ment in Glasgow, by the School Board, of two classes in lip-reading similar to those of Birmingham. One of the classes meets in a grammar school one hour on Monday and Wednesday evenings, for a term of six months, and the charge for the course is two shillings and six pence. The other meets in a high school building in a different quarter of the city, but for the same number of lessons and with the same teachers, and the cost to each pupil is ten shillings.

The *Volta Review* for November, 1910, describes an experiment fraught with much interest for the deaf, which is being tried at the "Mercy Hospital" in Kansas City. The hospital is devoted exclusively to the diseases of children, especially to the crippled, deformed and ruptured.

Two deaf young women have been allowed to enter the regular course of training for nurses. Their admission to the course is due to the influence of Dr. Katherine B. Richardson. One of the young women is totally deaf, and was educated in the school for the deaf at Fulton, Mo. The other is only partially deaf. The totally deaf nurse depends upon writing exclusively for communication, as no one in the hospital understands the manual language, and she has not been taught to speak or read the lips. The other young woman speaks and reads the lips well. The deaf nurses are never left alone in charge of the wards. A hearing nurse is always on duty. At night, careful instructions are given in advance and another nurse can call the attention of the deaf nurse by switching on and off the lights in an agreed-upon signal.

It is reported that the girls are comparing favorably in their work with hearing nurses. Their examination papers are satisfactory, and they show much quickness in observation. In the operating-room they are said to be more nearly on a par with other nurses than anywhere else. The physician seldom speaks while operating, and the quick observation of the deaf has enabled these girls to supply the needs of the operator almost before he can express them.

Mr. E. A. Gruver, Principal of the "Central New York Institution for the Deaf," at Rome, N. Y., in the thirty-fifth annual report of that institution, has the following very excellent word to say on the proper classification of deaf children for educational purposes. "Too much stress cannot be placed upon the proper classification of deaf children if good results are to be obtained. The mentally deficient deaf child has no place with the bright deaf child, nor has

the child with perfect hearing but not mentally strong enough to learn to talk, any place with the semi-deaf or semi-mute of good mentality and capable of development."*

"Each child has its proper place in a well classified educational system, and each is capable of some development, but to place them in the same room or under the same roof with "normal" deaf children does not give either grade of child the chance for the proper development that it has a right to expect, and may, as has been proven in many instances, cause harm to the bright deaf children. To relieve the condition of mentally deficient deaf children at the expense of bright deaf children, is too great an expenditure of time and energy at too great a sacrifice of character, but to uplift mentally deficient deaf children under proper conditions, with suitable environment, is a work no less interesting and inspiring than the work of educating normal deaf children. It is the duty of the state to make proper provision for their education and support."

Director Wende, of the Royal Institution for the Deaf, at Berlin, Germany, also has something to say on the subject of classification. In a paper read before a meeting of the "Union of Berlin Teachers of the Deaf" he suggests the following grouping:

- A. The "Deaf and Dumb" proper.
 - 1. Of normal intelligence.
 - 2. Of feeble intelligence.
- B. The deaf in possession of sufficient hearing to allow language-teaching through the ear.
 - 1. Of normal intelligence.
 - 2. Of feeble intelligence.
- C. Later acquired cases of deafness.

The percentage of pupils in schools for the deaf in the United States that are taught in pure oral schools increased one and five-tenths per cent in 1910. The percentage taught by oral methods in "combined" schools increased one and three-tenths per cent.

*"Semi-mute" is an awkward and misleading term which, for lack of a better word, is used to designate those children and young people who have become totally deaf after speech has been acquired. The existence of such a term to describe this class is a sad testimony to the pathetic fact that the speech of many such children has, for lack of the proper attention at the proper time, so deteriorated that they are in reality almost "semi-mute." A condition which is avoidable. Ed.

SOCIETY PROCEEDINGS.

NEW YORK ACADEMY OF MEDICINE.

SECTION ON LARYNGOLOGY AND RHINOLOGY.

Regular Meeting, April 27, 1910.

JOSEPH H. ABRAHAM, CHAIRMAN.

Bismuth-Paste Injections in Nasal Accessory Sinus Disease: Illustrated by Lantern Slides. By JOSEPH C. BECK, M. D.

DISCUSSION.

DR. WILSON asked Dr. Beck if the bismuth injections were followed by neuralgic pains.

DR. McCULLAGH inquired if Dr. Beck washed out the cavities before making the injections, or whether the pressure of the bismuth paste alone forces out the secretion contained in the cavities.

DR. SIMPSON asked what was the theory of the cure—was it anti-bactericidal or mechanical? That seemed to be a rather important point.

DR. CARTER said that he did not understand exactly how long the bismuth paste was expected to remain in the cavity; if, as he assumed, it was to remain permanently, would not that destroy the function of the air cavities which add an agreeable resonance to the speaking voice?

DR. BECK said that on a page of his paper, which unfortunately had been lost, he had discussed the question of whether the cure was based on a chemical or mechanical result. In local applications, where the cavity is injected without removing the mucosa, there is a positive destruction of bacteria. In the presence of the fluids of the body it is a chemotactic, acting something like Bier's hyperemia, producing a chemical effect and destruction of the bacteria. Bismuth paste stimulates granulation and acts as a framework, and so effects a cure.

DR. LOEB had spoken of necrosis. He did not expect a cure of such a condition. It is a method to be tried however, when other means fail, even when necrosis is present.

DR. MYLES had spoken of compression. That is one of the good effects of this treatment. Like Bier's treatment, it squeezes out the fluids, and then aids in absorption.

Replying to the question about neuralgia there were some complaints. He had had patients complain of toothache, but it passed off.

Replying to Dr. Carter's question about what becomes of the paste—as much as eight months after injection very little has been absorbed when the mucosa has not been disturbed. The quantity, however, is so small that it causes no change in the resonance or function, and the patient does not complain of a heavy feeling in the head, etc. In the cases of curetment, no bismuth remains after a short time; in a month or a month and a half it is all absorbed. It is absorbed rapidly from a granulating or non-epithelial-lined cavity; only where it is lined with mucous membrane does it remain longer.

The symptoms of poisoning are not produced by arsenic, for all the bismuth we use is tested and is free from arsenic. We use only positively pure bismuth. Two kinds of poisoning may occur, nitrite poisoning, and the bismuth poisoning itself. The latter is a slow process and can be checked. Only by neglect will death result when large quantities are used, as in empyema of the chest, etc., but never as a result of injecting sinuses.

No washing out or preparation of the cavity is necessary before injecting. The bismuth squeezes out the discharge. The bismuth is changed by the secretions into sulphide of bismuth, and then a yellow, thick pus is changed to what Dr. Emil G. Beck calls a "dish-water discharge," which is grayish in color and which is an indication that the case is going on nicely. If it remains yellow and thick, a necrosis is at the bottom of the trouble as a rule.

Regular Meeting, May 26, 1910.

PRESENTATION OF PATIENTS.

Case of Vincent's Angina. By HUBERT ARROWSMITH, M. D.

Abstracted in the November, 1910, issue of THE LARYNGOSCOPE, p. 1092.

DISCUSSION.

DR. FREUDENTHAL expressed his interest in the case as it was the first of the kind that he had seen. It would seem that part of the swelling in the larynx might have been due to the patient's nephritic trouble.

DR. SIMPSON thought that if the patient were strong enough it might be well to try the method of intubation advocated by Dr. Mosher, of Boston. He has invented an intubation instrument by which with long forceps the tube is passed down through the spat-

ula used for the direct examination of the larynx and it has worked very successfully. The patient might be intubated by the ordinary method with a laryngeal mirror, and when the tracheotomy tube is in place it might be a very excellent thing to try using one of the shoulder tubes.

DR. ARROWSMITH, replying to Dr. Simpson's suggestion, said that he had attempted to relieve the patient with one of the ordinary intubation tubes, and by direct laryngoscopy as well, but had not been able to dilate the larynx or get anything at all in from below. He could not even get a fine sound in.

DR. FREUDENTHAL said that a year ago he had demonstrated two cases of bilateral abductor paralysis,—one due to tabes and the other due to peripheral lesions. The second patient he had seen a week ago, and now presented him again for inspection. He shows the same picture observed a year ago. The history was that he had had typhoid fever some five years previously, and a month or so afterward suffered from oppression of the chest and had some difficulty in breathing. A year and a half ago he applied to Dr. Freudenthal for treatment, and he had then a very typical abductor paralysis. Strange to say, he has been able to attend to his work all these five years; his voice is at times quite clear, but he has severe attacks of dyspnea, and there is danger that he may be carried off in one of them. There is no specific history. Operation was proposed, but refused. Dr. Freudenthal said that he hoped to be able to persuade him to allow the removal of a part of the vocal cord, and would demonstrate the case again in the winter.

Another interesting case which he would like to mention briefly was that of a child of 8 years who came to the clinic with a history of having *swallowed a coin*. Having been interested in Dr. Francis Huber's method of removing a foreign body with the aid of a fluoroscopic screen, he attempted the same method in this case. The child was placed flat on the table in the center of which was a piece of muslin. Under the table was the X-ray bulb, and the fluoroscopic screen was held over the child. As soon as the light was turned on, the coin could be seen in the esophagus. The child was held by the assistants, and then opening its mouth, Dr. Freudenthal guided the forceps with his finger into the esophagus; the forceps could be distinctly seen as they entered the esophagus, grasped the coin, and pulled it out. The entire procedure occupied only about five seconds, and was not much more difficult than removing a coin from the table. The method is so far superior to

the old methods of bronchoscopy and esophagoscopy, that he was sure any one who tried it would be pleased. No ether was employed, and in a few minutes the child was sitting up and playing. Whether this method is practicable in all cases has to be seen.

DR. FREUDENTHAL said that a very interesting point had been brought up. Why should not such a patient die during the night. There seemed no more reason to question that than why the laryngeal crises come so frequently in the night. It might have been that this man had a laryngeal crisis during the night and died. It is difficult to explain why these crises occur during the night.

New Operation for the Relief of the Various Obstructions of the Anterior Nares. By JOHN E. MACKENTY, M. D.

DISCUSSION.

DR. SIMPSON said that if Dr. MacKenty has devised an operation which would relieve the collapsed condition of the alae nasi he is certainly to be congratulated. It is a most important and difficult condition to meet surgically.

Case of Apparently Primary Laryngeal Actinomycosis. By H. ARROWSMITH, M. D.

Published in full in the October, 1910, issue of THE LARYNGOSCOPE, p. 977.

DISCUSSION.

DR. COX said that he had had an opportunity of seeing the case, and that the drawings presented a beautiful and accurate picture of the condition.

DR. HAYS said that most of the cases he had seen were those of fistula-formation in actinomycosis of the jaw. He had also seen one case of actinomycosis of the lungs with involvement of the pleura. In cases where the lungs are involved healing does not take place but a large fistula is formed. The only means of determining positively whether this case is actinomycosis is by bacteriological examination of the sputum; it might be a sort of aberrant form of tuberculosis where even the microscopic forms would be different from those usually seen.

DR. ARROWSMITH said that a microscopic section had been made from a portion of the mass removed from the larynx, but the sputum showed nothing.

The Relation of Epistaxis to Various Constitutional Diseases. By HAROLD HAYES, M. D.

DR. HAYS has divided the constitutional diseases into seven groups, as follows: Infectious diseases; the anemias; circulatory

diseases; respiratory diseases; specific inflammations; miscellaneous conditions; and drug poisoning. Each one of the groups was again subdivided and he took up in detail the relation that epistaxis might bear to each one. He said that in infectious diseases the interpretation of the direct cause of the hemorrhage was very important, as, for example, in acute lobar pneumonia where the inability of a part of a lung to exercise its function creates an increased blood-pressure, and consequent turgescence of the tissues. The bleeding from the nose in such a case may be life-saving, diminishing the blood-pressure and the consequent strain on the lung. The site of predilection of the nose for hemorrhage may be easily accounted for when the body resistance is lowered because of the anatomical relations of the vessels existing there. He went on to explain in detail the anastomosis of the most important vessels, even taking into consideration the intimate relationships of veins and arteries; the return of blood through venous channels is impeded because of the flimsiness of the surrounding structures. The deduction is plain. The tissues become engorged, the venous channels are proportionately obstructed, and the delicate mucosa gives way under the increased strain.

In diphtheria, sub-acute inflammatory condition within the nasal fossi is probably produced from contiguity with the surrounding infected tissue, or the lack of resistance may be due to the action of the diphtheria toxin itself upon the terminal nerve fibres within the blood-vessel, producing a paresis of the vessel walls, a localized engorgement, and consequent rupture of the nasal mucosa at the weakest point.

In scarlet fever, the epistaxis is caused mainly by the diminished resistance of the patient on account of the toxemia. In the pseudo-diphtheritic and gangrenous cases, the hemorrhage is caused purely by the local condition. In measles, the hemorrhage is mainly in the hemorrhagic form. This is usually associated with a hemorrhage elsewhere. In whooping-cough, the epistaxis generally is the result of an intense venous congestion which finally distends the tissues to such an extent that rupture takes place. The hemorrhage, purely mechanical as a rule, may be considered a safeguard of nature, which may relieve the congestion, for the time at least, and avoid the extravasation of blood in a more serious location, for example, in the brain tissues or meninges.

It is a peculiar fact that the majority of diseases with which coryza is associated do not, as a rule, give rise to epistaxis. On

practical grounds, it is hard to account for this seeming inconsistency. For example, nasal hemorrhage is often lacking, even in the most extreme cases of hay-fever. Theoretical conjectures can easily be formed. Where there is an exudation of large amounts of serum and mucous, the probability is that the blood-vessels of the nares are not engorged, but on the contrary, because of the unusual transudation which takes place, they are diminished in calibre. In other words, the transudate takes the place of the nasal hemorrhage, in fact, is blood minus some of its important constituents.

In taking up the anemias, Dr. Hays said that if one considers the circulation as an entity which is liable to disease, he may regard secondary anemia as a distinct disease. Naturally the blood, flowing throughout the body and acting as the energy-restorer to the debilitated organ, exercises a most important function and the effect of the disease of the blood upon the organs it supplies is proportionate to the amount of loss of the substance with which it rebuilds these organs with new energy. The whole body suffers, and the anemia of the brain, the muscles, the digestive organs, and the various mucous membranes, is simply an expression to explain the devitalized condition of these various parts. Traumatism, under the circumstances, however slight, is liable to have its effects increased and the resultant hematoma that forms rupture easily, and the hemorrhage, whether moderate or profuse, lasts a considerable length of time, both because of the inability of the capillaries to contract and because of the diminished coagulation-power of the blood.

In taking up the question of scurvy, he said that hemorrhage from the gums is much more frequent than hemorrhage from the nose in infantile scurvy, although in the scorbutus of adults epistaxis occurs more often. He explained this by the association of the hemorrhages with the bone changes; the hemorrhages in scurvy are mainly sub-periosteal and seem to take place near the growing centers of the bone. In infants, the growth of the jaw, particularly the upper jaw, is very rapid, and as irritation occurs from without and within, the first from frequent feeding (and most of these cases are in artificially-fed infants), and the second from the irritation caused by the eruption of the teeth, the liability to hemorrhage is more apparent.

Speaking of hemophilia, he said he thought that this condition is more common than is generally supposed. He explained the disease on the basis that there are pathological changes in the smaller vessels, which seem to be thinner and lacking in muscular tone. He

thinks that it is particularly important for the nose and throat specialist to make careful inquiry as to whether there are any bleeders in the family, before undertaking operative work.

He divided the circulatory diseases into two groups—those due to increase in connective tissue elements, in both the myocardial and blood-vessel walls; and secondly, those due to some pathological lesion of the heart-valves or some congenital deformity of the heart. In patients with hardened arteries, an epistaxis is considered frequently a premonitory sign of apoplexy, and it is a question whether when such a sign occurs it would not be a wise procedure to open up a vein and diminish the tension in the cerebral vessels. The same result is often accomplished by means of Junod's boots, which on creating a vacuum, drew the blood to the extremities and away from the vital centers.

The nasal bleeding in respiratory diseases may be due to two causes: First, at one time or another there is an increased pressure in the blood-vessels, possibly some cyanosis, and this in itself may be sufficient to cause a severe bleeding from the nose, the same as occurs in cardiac disease. In such instances the bleeding may be considered of good import. Secondly, the epistaxis may result from a secondary anemia. At such times the loss of blood is a decided detriment to the patient.

Speaking of vicarious menstruation, he believes that the epistaxis meets a physiological necessity of a body in which the *via naturalis* is shut off. Apparently the recurrent menstrual period is not only connected with the sex organ, but it is a part of the physiological activity of the female. The hemorrhage is seldom severe enough to cause any permanent changes, but he cited one case reported by Fricker, of a girl who never menstruated but who suffered profuse nasal hemorrhage every six weeks, finally dying of exhaustion.

He said that on looking up the literature on the subject he was surprised to find few cases reported, and his object in bringing this subject before a body of specialists was to impress upon them the definite relationship that does exist between epistaxis and various constitutional diseases.

DISCUSSION.

DR. FREUDENTHAL said that Dr. Hays' paper covered so much ground that it was difficult to discuss it all. He had brought out the point that epistaxis often occurs in the beginning of typhoid fever and pneumonia. While that is true, in his own experience,

serious epistaxis more frequently occurs late in these diseases, after the patient has been ill for four to six weeks. While in the German army he had treated many patients with typhoid fever; few of these had serious epistaxis, and then only after four to six weeks' sickness. He attributed this not only to the great anemia but also to the dry condition of the nasal mucosa. The bleeding generally occurs from that cause.

He has seen several cases of purpura hemorrhagica, and disagreed with what Dr. Simpson had said in regard to their non-fatal character. Most of the cases he had seen occurred in young girls from 8 to 10 years of age, and one of them had died. One of them had a very severe bleeding, apparently from the posterior nares. None of these cases had been reported. He has now under observation a patient with cirrhosis of the liver, with an old history of specific affection. He bleeds from all parts of the nose and the throat, and even from the outside of the nose. It is a unique case indeed.

DR. SIMPSON said that Dr. Hays had so thoroughly covered the subject that little could be added. Certain points had been emphasized which would bear repetition. The question that always comes up in epistaxis is whether it is an effort on the part of nature to relieve a condition, or whether it should be checked by treatment. It sometimes requires very careful observation to decide this. The question brought up at the last meeting by Dr. Cox in reference to high blood-pressure has an important bearing on this subject. Another point is that epistaxis is rarely fatal, even in severe forms. He has spoken on this subject before, especially in regard to lactate of calcium. He has often been impressed with the amount of blood that can be lost from epistaxis without subsequent discomfort, though as these patients grow older they show a little more effect. Recently, in a hospital, he saw a very peculiar hemorrhage-case. The patient was suffering from leucemia, and on pricking the ear in order to make a blood test, a hemorrhage occurred which could not be stopped, and the patient finally bled from all parts of his body and died. The various conditions under which epistaxis can take place have been very thoroughly shown by the writer of the paper.

DR. ABRAHAM said that vicarious menstruation had been mentioned. Dr. Delavan had seen a case with him in consultation. The patient was a young woman on whom he had operated for deflected septum. The packing was removed on the second day, and on the

fifth day she began to bleed from the wound which had been perfectly clean and healthy. Everything that could be thought of had been tried to check the bleeding. The bleeding continued through the lacrimal duct. The patient was then questioned in regard to her menstruation, and she remarked that it was over-due. She was then given a dose of ergotin, which undoubtedly brought on her menstruation and the nasal bleeding ceased. She had never had anything of the kind before.

Three sisters had consulted him in regard to nose-bleed,—one of them 18, another 25, and the third, 30 years of age. On examination, very large blood-vessels were observed coursing along the septum, much larger than ordinarily seen. The mother also was subject to hemorrhages and another sister, making five in one family,—all of whom had enlarged blood vessels in the septum. One of the young women had a hemorrhage in a department store and it was so severe that she had to be sent to a hospital. Nothing was found of an organic nature, all of the organs seeming to be normal. The vessels were cauterized with the galvano-cautery, which permanently stopped all hemorrhages.

DR. SIMPSON, referring to what Dr. Carter had said about lactate of calcium lessening the coagulability of the blood after being administered for ten days, said that he could quote more than one case to the contrary. The patient to whom he had referred simply cannot live without it. There seems to be a possibility of a divergence of opinion upon the subject, and the effect may depend upon the individual case.

DR. HAYS said that the subject was a very large one, and he had even had to leave out nearly half of his paper in reading, but he agreed with Dr. Freudenthal that in the infectious diseases there were two stages in which the hemorrhages appear, and that the second might be more severe.

One point that he had wanted to bring out was that we are wont to think of the hemorrhage as a local lesion, but that we should think more of the general condition; if the heart were more frequently examined and the general constitution of the patient more carefully studied, some cause for the epistaxis might be discovered.

Replying to what Dr. MacKenty had said, in regard to an increase in arterial tension,—when there is an increase of arterial tension it is due to the increase in connective tissue in the arteries and the myocardial wall and to an increase of connective tissue in the

vessels of the liver, kidneys, spleen, and other organs. He makes it a custom with every patient over 40 years of age to take the blood-pressure, for many patients respond more favorably to treatment when the blood-pressure is lowered. Some of the cases of leucemia might prove very interesting if we had extensive examinations. One patient came to the hospital with a gangrenous condition of the gums, of which she died. The question arises as to why the bleeding should have taken place from the gums instead of from the nose. It might be said that it was a less resistant place at that time, for the patient was in a poor condition. If she had been picking her nose, it might have come from the nose.

The family reported by Dr. Abraham reminded him of the cases reported by Osler of multiple telangiectases of the skin. The cases reported by Dr. Abraham might have had telangiectases in the nose and dilated blood-vessels there which might have caused the hemorrhage.

He expressed the opinion that if there were more time, many other points could be brought out by a discussion of the subject.

DR. HAYS presented to the Section a model of the first pharyngoscope. The second model which he is now using is a more perfect instrument, but this one was devised by him on March 15, 1909, and he wished it to be on record, as other similar instruments were being introduced, and some question of priority might arise.

The Chairman introduced as an honored guest, Prof. Holger Mygind, of Copenhagen.

PROFESSOR HOLGER MYGIND regretted that he had been prevented from arriving in time to hear the papers of the evening, and said: It is a great pleasure to me to be here to-night, and I thank you, Mr. President, and the members for the cordial reception you have given me. I have come to a great city and a great land, from a small city and a small land, a land, however, where one great discovery has been made of great importance to laryngology and otology,—that of adenoid vegetations; made by my late and dear master, Wilhelm Meyer, who made his discovery in a very simple way. At that time, Wilhelm Meyer had no clinic, was attached to no university, no hospital, did not use a microscope, knew nothing of bacteria,—but he had the genius of doing in a simple and straightforward way that which the scientific man of the present day sometimes forgets to do.

In the year 1867, a young girl came to him suffering from deafness. He saw that she breathed through the mouth, and was hardly

able to breathe at all through the nose. He inflated the Eustachian tube with air, but the hearing only improved a little. He found nasal catarrh, and treated it, but the patient went on breathing through the mouth. He then thought that the trouble must be in the pharynx, and treated the pharyngeal catarrh, but the patient went on breathing through the mouth.

Take this schematic section of the head. Here the air goes through the nose, like that. Meyer said: "It cannot be there; I have treated the pharynx; the patient still breathes through the mouth, it cannot be there, if it be not here, and be not there, it must be between the two cavities"—and he did a very simple thing; he passed his finger up into the naso-pharynx and found the adenoid vegetations, which have, of course, existed for thousands of years but were never discovered before, simply because no one had ever before thought of putting his finger up there.

This way of making deductions is as simple as possible, and is in this case a true sign of genius. That is just what geniuses often do—they do a very simple thing which no one has done before or thought of. Now, Meyer belonged to a small country—Denmark—and he wrote his first article on adenoid vegetations the next year, 1868, in a Danish medical paper. No one took the slightest notice of it. In the year 1869, there was a report in Schmidt's *Yahrbücher* about Meyer's discovery; no one took the slightest notice of it. Then he published his discovery in the *Medico-Chirurgical Transactions*, in the year 1870; no one took the slightest notice of it. Seven years after he made his discovery he published a third article in the *Archiv für Ohrenheilkunde*, and then people began to take notice of it, and by degrees it became known to all and has been of benefit to thousands and thousands. It is well to remember this fact now-a-days, and for us who are engaged in practical work, to remember to use not only the microscope and all the other instruments and methods which help us to make our investigations and diagnoses, but also to use such simple observations and deductions with our patients as Meyer did in this case which he treated in the year 1867. I was quite unprepared to speak to you to-night, but I happened to think of this, and having known Meyer so well, I thought it might interest you to hear these small details regarding that great discovery.

NEW YORK ACADEMY OF MEDICINE.

SECTION ON LARYNGOLOGY AND RHINOLOGY.

October 26, 1910.

JOSEPH H. ABRAM, CHAIRMAN.

Case of Columnar Cell-Epithelioma of the Antrum Cured by Radium. By WOLFF FREUDENTHAL, M. D.

DR. FREUDENTHAL said that he had hoped Dr. Harmon Smith would be present to give the earlier history of this patient, but that he had been unavoidably detained, and had sent a written history of the case.

F. L. H., driver, 43 years of age, had suffered from nasal obstruction for eight years before applying to the Manhattan Eye, Ear and Throat Hospital for treatment. Dr. Smith removed polypi at several sittings, and on January 8, a piece was removed which aroused suspicion and was sent to the laboratory for examination. It was reported to be columnar cell epithelioma. The patient refused radical operation by a general surgeon, and radium was applied, first for ten minutes and then for two hours at a time, during several months. Finally, on June 6, seventy millegammes of radium were applied (1,500,000 radio-activity) for forty-two hours consecutively, after which the tumor disappeared entirely.

DISCUSSION.

DR. MYLES said that his experience with radium had not been extensive, but he thought that Dr. Freudenthals' method promised much; for the average radium expert is generally in a hurry. He inquired the expense of a radium tube of seventy millegramme-activity. The question was raised concerning the administrator's feeling of safety when he placed \$8,000 worth of radium in the nose of a patient for any length of time.

An Unusual Case of Papillomata of the Larynx. By W. W. CARTER, M. D.

Published in full in this issue of THE LARYNGOSCOPE, p. 102.

DISCUSSION.

DR. EMIL MAYER said that these cases of papilloma of the larynx in adults are very rare. He recalled a similar case, however, in which he removed such a number of masses as to fill a half-ounce bottle. That was ten years ago, and he still sees the patient from time to time. There has been no recurrence.

DR. DELAVAN referred to a case under radium treatment at the hands of Dr. Robert Abbe, of New York, which he had seen in consultation with Dr. Abbe. The patient was a child of 7 years, suffering from recurrent papilloma of the larynx and the result of treatment would answer the question asked about the application of radium to intra-laryngeal growths. This little patient had been suffering from laryngeal papilloma from a very early age. Long before she came under Dr. Abbe's care an extensive incision had been made in the trachea for the purpose of inserting a tracheal cannula. This incision was still open and Dr. Abbe had utilized it for the application of the radium to numerous papillomatous growths below the vocal bands, and also above them. Treatment had been carried on at intervals for several months and the speaker had recently examined the patient and found marked improvement, all but one or two of the papillomatous areas below the vocal bands having disappeared. Those which remained were very small and hardly noticeable. The treatment appears to have been remarkably successful.

The case was interesting in view of the persistence with which the growths had returned after all other forms of treatment. If other cases subjected to radium were to show similar results, its value would be unquestionable, for it must be remembered that in the light of our present knowledge it has become a method of the last resort, owing to the lack of success of other means.

The speaker suggested that in describing cases of papilloma it was very desirable that as clear an idea as possible be given of the type of growth represented in a given case; for papilloma presents itself in great variety, varying from little growths that spring up and spontaneously disappear or are detached and coughed out by the patient to growths which at first appear benign and finally prove to be malignant, or which on the other hand show a tendency to rapid recurrence when removed or, again, grow with great rapidity and attain considerable size. Beside these types there are many variations seen, each one offering peculiarities of its own.

The same plan of treatment may not apply to all of these varieties alike; for instance, local applications of alcohol, solutions of zinc, and as has been lately recommended, of salicylic acid in solution while curative in very mild forms of papilloma, may be quite powerless in the growth of more active character. The success of surgical treatment too in these cases depends to a large degree upon the character of the growth. Painsstaking accuracy of description therefore is very desirable. The speaker wished to express his appreciation of Dr. Carter's well-described case.

DR. MYLES, referring to the subject of multiple papilloma in old people, said that at the last annual meeting of the American Laryngological Association, someone reported a patient who had been the rounds of many physicians and had had a great many papillomata removed. He said he had had a patient who, for ten years has suffered from profuse multiple papillomata of both ventricles, both cords, the arytenoids, the epiglottis, and the subglottic region. When this patient first applied for treatment, she could hardly breathe, and had no speaking voice. Something like one hundred and seventy of these papillomata have been removed from time to time. He does not, however, touch them more than once or twice a year. The growths do not seem to recur on the operated areas, but come from new points. There are two growths, one is on the arytenoid fold and the other on the inner surface of the epiglottis which he has left there for seven years. They have not changed in that time, nor do they seem to affect the voice or the throat. The papillomata are very easily removed after the patient is under morphine and cocaine control. Those under the vocal cords are the most difficult to remove. Many kinds of instruments have been used in getting them out. The patient usually has a good speaking-voice for several months, and then develops several of these papillary excrescences which disturb her. Alcohol and various other measures have been tried to prevent re-formations, but none have proved successful. Her throat is in much better condition now than at any previous time since he has seen her,—being approximately normal.

DR. JOHNSON said that Dr. Carter had spoken of his case as a fungoid-appearing polypoid growth. As Dr. Delavan had said, this is quite distinct from the small pedunculated growths that are occasionally seen springing from the cord. Some ten or twelve years ago he had shown a little girl from whom he had removed a polypoid growth in a fungoid condition. At the time of, and immediately following the operations it was difficult to say from what part of her throat the growth sprung—whether from the vocal cords or elsewhere, as the vegetations filled the whole area that could be seen in the laryngeal mirror and it required many efforts at removal, and the tissue removed filled a two-dram homeopathic vial, the cords were injured as it appeared at the time, although he said that he saw the patient recently and that she is now a woman and complains of no trouble and has a good speaking voice.

DR. CARTER said that he had hoped that some of the members would express themselves as to whether thyrotomy is ever justifiable in a case of papilloma of the larynx. Personally, he has reached

the same conclusions that Dr. Smith did in regard to papilloma of the larynx in children—that it is not justifiable. Dr. Carter believes that thyrotomy should not be performed in these cases chiefly (1) because it is a major operation; (2) it affords no advantages over the endo-laryngeal route in rendering a recurrence less likely; (3) the patient is more apt to lose his voice permanently; and (4) stenosis of the larynx is more apt to occur. Dr. Delavan had made a good point in suggesting that these growth should be described as minutely as possible, and the description he had given was as definite as he could make it—it was a papilloma with a fungoid appearance. The subsequent review of the case had not enabled him to add anything to that description. The papilloma seems to be the same as any papilloma of the larynx, according to the pathological report.

Osteo-Sarcoma of the Superior Maxilla: Radium Treatment:
Cure. By WOLFF FREUDENTHAL, M. D.

(Abstract of report by Dr. Samuel McCullagh).

Mary S., aged 18 years, Irish birth. Applied at the Manhattan Eye, Ear and Throat Hospital for treatment, December 8, 1908. For many years had had a sinus under the right cheek which discharged at various times. Five months previously she first noticed a growth on the cheek below the inner canthus of the right eye. Examination showed this to be apparently cystic in character, not painful or tender. The cyst was aspirated, but the growth continued to increase in size, and on December 21, was removed. It stripped readily from the bone but was amalgamated with the soft tissues of the cheek. The pathologist reported that the specimen examined showed nothing indicative of cystic formation, but consisted of fibrous connective tissue filled with the products of inflammation. On March 3, 1909, a more radical operation was performed, and the pathologist reported that its malignancy could not then be established, but that it suggested very strongly an osteo-sarcoma. On April 6, examination showed recurrence of the growth and the case was again operated upon on April 28. This time the pathologist reported that the conditions would tend to confirm the diagnosis of osteo-sarcoma. The growth again recurred, and a specimen removed on March 9, 1910, was pronounced to be fibro-sarcoma. The patient was then referred to Dr. Freudenthal for treatment.

The patient was treated with radium as in the former case, beginning with an application of a few minutes at the first sitting, up to thirty-six hours at one stretch, seventy millegammes of radium

being used. Otitis media developed under this treatment, but subsided within a few weeks. In September, the patient had erysipelas, but was finally completely cured.

Accessory Thyroid of the Tongue, Possibly Cystic. By T. J. HARRIS, M. D.

The patient, a girl of 16 years, gave a history of having had some obstruction to her swallowing for about six months. When first examined, in the middle of the summer, there was distinct difficulty in articulation, and her voice sounded as though she had a potato or some other foreign body in her mouth. She stated that she had had no pain at any time, nor bleeding, and there was no evidence of any external deformity. The men who saw the case were very much in doubt as to the diagnosis,—whether there was a cyst of the tongue, a gumma, a tuberculoma, or sarcoma. A small section of the growth was removed for examination, but gave no satisfactory findings.

On returning to the city in the Fall, I removed half of the mass with a pair of strong forceps. There was very little bleeding. Previous to this I had gone into the mass with a needle and bistoury, finding only a small amount of transparent fluid. It resembled very much the appearance presented to-night, a globular mass the size of a small pigeon-egg at the base of the tongue, with a moderate distribution of vessels over the surface. Dr. Wright reported it as containing thyroid gland tissue, but said nothing as to its malignancy or non-malignancy. The patient has improved in general health since the operation, and has gained in weight and appetite.

These cases are very unusual. I have never seen another like it, and on looking up the literature I find between thirty-five and forty on record. They were formerly regarded as adenoma, before Hiss made his histological studies, showing remains of embryonic tissue. In the third week of embryonic life there are four branchial clefts developed at the cephalic end. The first of these closes very rapidly, but the other three more gradually, and they form a triangle, the triangle of the meso-branchial space. Behind the first of the three, or out of it, the upper portion of the tongue forms, while the lower third forms the posterior and lower portion of the tongue. Behind the cleft which forms the upper portion of the tongue is a little diverticulum of epithelium, which Hiss has called the tuberculum impar. As they close in, they enclose the patch of epithelium which forms a canal down the tongue to what becomes the thyroid gland. Two weeks later, this in the normal course of events becomes obliterated. In a number of anatomical studies, remains of the canal

have been found. The region where this tumor is situated, called by Hiss the caecum magnum, seems to be the particular locality where we find extensive thyroid tissue. This is the result of a diverticulum of epithelium that comes out of this canal. I think we have here however, an accessory thyroid of the tongue.

One of the earliest cases on record was described by Dr. Warren, of Boston. Dr. McBurney has reported a second case, Dr. Watson, of Philadelphia, two cases, and Dr. Theisen, one case. These are among those that have been reported in American literature.

The clinical history of this girl is very typical. With the exception of three cases they have been found in women, and mostly in young women. The history is that of a painless growth, interfering with swallowing. It is apt to be very vascular, and in most cases there has been severe bleeding. All the cases have recovered after operation. There are no cases of malignancy.

There are three methods of operating: 1. Through the mouth with the forceps, or with a wire snare, hot or cold, as Dr. Watson, of Philadelphia does, as Dr. McBurney does, and as I have done. 2. Forcibly drawing out the tongue under ether and excising the mass; and 3. The method employed by the French surgeons—under an anesthetic separating the symphysis down to the hyoid bone and removing the mass. This method is almost too radical for most of the cases.

I am very much inclined to think this a true accessory thyroid of the tongue. A number of the cases reported have developed myxedema after the removal of the gland, suggesting the absence of the thyroid. They have recovered after thyroid extract has been given to them. This point should be borne in mind. I am indebted for much of this information to an excellent article by Dr. Stevens, in the *Annals of Surgery*, 1904.

DISCUSSION.

DR. FREUDENTHAL said that he had showed a similar case a year or two ago—a girl of 18 or 19, who was subsequently operated upon by Dr. Silver, who made an incision from the outside and removed the mass with very little loss of blood. He was afraid to tackle it from the inside for it seemed very vascular, and he feared too much bleeding.

DR. MYLES said that he had had several cases, one belonging to the type referred to by Dr. Harris. The causal factor seemed to be cystic or stenotic disease of this duct from the tongue down to the thyroid. They have given him a great deal of trouble, under any

treatment less than complete radical removal of all tubular walls, and from the scars presented, these cases seem to have given trouble to other surgeons also. He said that Dr. Bodine and he worked on several of them and had finally cured them. The last case was a woman patient. Two years ago a cyst was removed from under the hyoid, and upon probing the duct it was found to connect directly with the base of the tongue. It was supposed that the bursa under the hyoid bone had something to do with the cause, but that seems doubtful. It seemed to be a thyroid cyst. It was all dissected out, passing under the hyoid bone. The patient, when she first appeared, was a very wretched being, but after the operation, was restored to excellent health. The point he wished to emphasize was that there duct, one enlargement of the thyroid tissue, as in this case, near the distal end of the duct on the base of the tongue; the other, the cystic and fistulous formations.

DR. JOHNSON said there is a great difference between the cyst which Dr. Myles described and that described by Dr. Harris. Two or three years ago he had performed an operation on such a cyst and later he received a letter from a friend in Providence, saying that the growth had returned, and expressing the wish to know what it was and what had been done with it. These cysts are rather grayish and have a fibro-cystic wall, while Dr. Harris says in his case the cyst under the microscope resembled, and he believes it was, thyroid tissue. That does not seem to be the case in the other instances—certainly not in those he has seen. They are gray in color, and this presents a more fleshy appearance. They are decidedly cystic, while Dr. Harris is uncertain whether his case is cystic at all.

DR. HORN said he had presented a case of tumor of the base of the tongue, and examination showed it to contain thyroid tissue. In the same case he removed a small tumor in the median line a half-inch in diameter. The tumor at the base of the tongue was an inch and a half in diameter, very firm and very cystic. Quite a little fluid was withdrawn with a syringe, but that had no character under the microscope. The tumor was split, and a section made from the fleshy part, which proved to be thyroid in character. The tumor was reduced to the extent of two-thirds, and presented no difficulties except for its size and the obstruction to swallowing. It also interfered somewhat with the voice. Since it was reduced it has given the patient no trouble and has shown no indication of further enlargement. He hoped to present the case again later.

(To be continued).

CHICAGO LARYNGOLOGICAL AND OTOLOGICAL SOCIETY.

Regular Meeting May 17, 1910.

GEORGE E. SHAMBAUGH, M. D., CHAIRMAN.

Case of Sarcoma of the Antrum. By OTTO T. FREER, M. D.

Published in full in this issue of THE LARYNGOSCOPE, p. 98.

DISCUSSION.

DR. E. FLETCHER INGALS: I have seen a number of cases of this kind, but none of the patients recovered; however, a case of recurrent fibro-sarcoma that did recover, is of interest. The patient was about 14 years old when I first saw him. The late Dr. Gunn attempted to remove a part of the growth, which had extended into the zygomatic region, but there was so much hemorrhage that he closed the incision without doing anything further. I removed the growth from the naso-pharynx and naris two or three times during as many years. Then he disappeared for a number of years. When he was 27 years old he called to see me and I found that the tumor had entirely disappeared, leaving a large cavity about the size of a hen's egg in the back part of his nose.

DR. C. M. ROBERTSON recalled a case of angio-sarcoma in a man 45 years old, where the left naris was occluded by a mass which protruded. It bled very freely. The antrum was filled with the growth and it had perforated into the orbit, causing exophthalmos. On account of the severe pain and the hemorrhage which occurred several times a day, and on account of the severe stench, he removed as much as possible with the punch forceps. The exophthalmos disappeared with the disappearance of the tumor. The patient was well three years later and has not been seen since. In another patient, 27 years old, with a fibro-sarcoma, Dr. Senn had removed the entire septum and external wall of each nostril. When seen, the patient had a growth in the nose which felt and cut much like soft rubber. The hemorrhage was profuse. He made several efforts to encircle with a snare, the tumor, which appeared to hang from the cribriform plate, but without success. The patient disappeared from observation. There is a difference in malignancy between the various sarcomata which involve the nose. Some disappear spontaneously. It is sometimes impossible to make a distinction between a myxoma, a fibroma, and a myxo-sarcoma. He believes that Dr.

Freer's case is one of myxo-sarcoma. In angioma, the hemorrhage is most alarming at first, but as one nears the base of the tumor, the hemorrhage stops.

DR. J. HOLINGER emphasized the value of the symptom of stench in these cases, which is not especially emphasized in text-books.

DR. F. I. BROWN saw in a man 40 years old, a sarcoma springing from the inferior turbinated body, right side. The tumor was a typical spindle-celled sarcoma. After its removal there was a rapid recurrence. After the second operation, the patient was given six X-ray treatments. There has been no recurrence. The characteristic stench was present in this case.

DR. J. C. BECK had seen several cases of sarcoma involving the nose. One was a case of fibro-sarcoma with necrotic area. The patient was operated upon by resection of the superior maxillary bone. The tumor recurred, but subsequently under large doses of potassium iodide, made a complete recovery. Syphilis in some cases is difficult to diagnose from sarcoma. Nasal sarcomata are often slow growing. This has been emphasized recently by Dr. Welsh. The stench which is complained of in almost all of the cases is undoubtedly the result of necrosis. He has seen two cases of fibro-sarcoma in which a temporary resection was done with no recurrence.

DR. FREER, closing, emphasized the attitude of the general surgeon to these intra-nasal sarcomata. There is little doubt but that every one of the cases mentioned here this evening would have been subjected by the general surgeon to a resection of the upper jaw or some other mutilating operation. The general surgeon takes the attitude that nothing in the nose can be attacked successfully without removing half the face. Dr. Freer has seen cases operated on by the general surgeon where the entire hard palate was lowered in order to get access to the nasal pharynx. The patient died on the table. Any expert rhinologist would have removed the growth intra-nasally. Of course, an extremely malignant tumor operated on intra-nasally without success would give rise to the doubt whether the radical external operation might not have been more successful. As a matter of fact, these malignant sarcomata will recur no matter what is done. The other sarcomata can be removed intra-nasally with recovery.

Presentation of a Case of Progressive Bulbar Paralysis. By R. H. GOOD, M. D.

Published in full in this issue of THE LARYNGOSCOPE, p. 100.

DISCUSSION.

DR. J. C. BECK saw the case with Dr. Good, in March, and thought it a case of progressive muscular atrophy. The Wassermann test was not affected by the administration of potassium iodide.

DR. A. HEYM has studied this case and considers it one of progressive bulbar paralysis; a rare disease occurring about the age of fifty, with a doubtful etiology. The lesion in this case is not confined to the medulla, but has extended to the spine. There is an atrophic condition of the upper extremities. Patella reflexes are somewhat increased and on one side there is a slight ankle clonus. There is no Babinsky. This increase in reflexes indicates that the process is extending to the spine. Bulbar paralysis is frequently the final step of some spinal diseases. The spinal form of progressive muscular atrophy begins in the upper extremities and later passes to medulla. This case is connected with a myotrophic lateral sclerosis. The interesting feature here is that the bulbar symptoms develop first and the process later extends downwards instead of the reverse as is the rule. The electrical tests show the reactions of degeneration of the muscles of the arm and hand but not in the face. The entire nervous mechanism is not yet entirely degenerated in any part. There is still some function in every group of muscles. Pathologically the process is an infection of the medulla. The motor nuclei of the facial nerve, the glosso-pharyngeus, the vagus, and the spinal accessory, are involved. There is atrophy of muscles without evidences of inflammation. Slowly progressing condition excludes hemorrhage. Tumor is excluded by the absence of tumor symptoms—choked discs, etc. Prognosis is bad. The duration, as a rule, is from one to three years. Patients die from paralysis of the heart when the atrophic condition finally attacks the motor nucleus of the vagus.

(a) **Papilloma of the Larynx Combined with Open Foramen Ovale in the Heart.** By J. HOLINGER, M. D.

(b) **A Case of Recovery from General Purulent Meningitis.** By J. HOLINGER, M. D.

(a) The co-incidence of papilloma of the larynx of children with a patent foramen ovale in the heart has been repeatedly described and always proved fatal. These children from their birth are much more cyanotic than the papilloma would lead us to expect.

Report of case: Child, 3 years old breathes very laboriously. Intubation and direct laryngoscopy failed. Tracheotomy brought

relief, but the child died after three days. Post-mortem besides papilloma of the larynx, shows emphysema, highest trachitis, and bronchitis, open foramen in the heart. The failure of intubation and direct laryngoscopy was due to two very short glosso-epiglottic bands, which caused the entrance of the larynx to contract to a slit as soon as the tongue was pushed forward.

(b) A woman, aged 28 years, had acute otitis media. A few days later all the symptoms of a general meningitis, sleeplessness, terrible headache, stiffness of the neck, brain-pulse. The large perforation was in Shrappnell's membrane, and the purulent secretion came directly from above. The diagnosis was purulent meningitis, following acute purulent otitis. An operation was refused; therefore aspiration, according to Prof. Bier, was applied. After three weeks, all symptoms had disappeared, and she attended to her household as usual. Seven months later again otitis media, two days later, meningitis; death after four more days. The post-mortem showed the acute general meningitis and encephalitis. Over the tegmen tympani the dura, pia and brain were adherent in one mass to an opening in the bone. Old grayish streaks were found over the base and large parts of the convexity of the pia, showing the large extent of the meningitis seven months previous.

DISCUSSION.

DR. N. H. PIERCE does not see how this case can be accepted as a proof that purulent meningitis ever recovers. The fact that the patient died, supports the contention that cases with purulent meningitis always succumb. The case is one of intermittent meningitis. This condition originating in a suppurative ear disease may develop a dozen or more attacks before the condition terminates fatally, and unless an operation is performed, the majority of them eventually die from a general purulent meningitis. The death occurs because of the extension into the cortex producing an encephalitis. Cases of serous meningitis do recover but a general purulent meningitis does not terminate in recovery. Dr. Pierce did not believe that the papilloma of the larynx had anything to do with the fatal termination in the case of the child.

DR. G. E. SHAMBAUGH: The various problems connected with inflammation of the meninges associated with diseases of the middle-ear are attracting a great deal of interest at present. It has been established that many cases presenting evidences of meningitis which were formerly accepted as proof that the patient had a fatal malady, may recover if the proper operative procedures are carried

out soon enough. It appears that cases of serous meningitis may terminate spontaneously in recovery. That cases suffering from a diffuse suppurative meningitis may also recover if the focus of the infection in the ear is removed and the proper drainage established seems also to be possible. Whether a case of purulent meningitis more or less circumscribed may not tend to recovery in certain cases where nature has provided drainage, is the question which this case of Dr. Holinger's throws light upon. This case is one of very great interest as the pathological findings and the history seem to suggest that a case of circumscribed purulent meningitis may tend to spontaneous recovery. That the patient finally succumbed to a recurrent attack which resulted in general diffuse meningitis cannot be accepted as proof that the recovery from the previous attacks might not have been permanent had the patient not suffered from an acute exacerbation of the middle-ear process.

DR. A. HEYM: A meningitis may be latent, then become acute again. This may have been what took place in Dr. Holinger's case.

DR. J. HOLINGER, in closing: Prof. Schwartz, at the Congress in Budapest, contended that when a case of meningitis recovered it was serous and not purulent. In the case here reported, the pus was seen coming from the roof of the attic. It did not come from the antrum. The woman was well for seven months after the first attack, did her work and complained of no trouble. Of course, she had the suppurative otitis to which the meningitis was secondary. She recovered from the first attack but that the second attack of meningitis was but a continuance of the first I do not believe. The changes in the pia produced by the first attack were very clearly marked.

Surgery of the Middle Turbinate. By A. H. ANDREWS, M. D.

Dr. Andrews divides the abnormalities of the middle turbinate that may call for surgical interference into two classes. First, conditions of the middle turbinate itself, second, of the surrounding structures. He believes that the turbinate may lie too close to the outer wall and interfere with the drainage from frontal sinuses, anterior ethmoid-cells and maxillary sinuses. He believes that where it does not seem to interfere with drainage it may still be a source of irritation and reflex disturbance by pressing upon the septum by extending to the inferior turbinate. Of the abnormalities of the neighboring structures which may necessitate the removal of this structure he includes the following: Deflexion of the septum and enlarged bulla of the ethmoid.

Among the commoner diseased conditions which are generally recognized as calling for removal of the turbinate are: 1. Polypi springing from or recurring in the immediate neighborhood of the turbinate. 2. Chronic disease of any of the anterior group of accessory cavities, especially when the turbinate itself is diseased or when it lies so close to the lateral wall as to interfere with drainage, ventilation or with examination of these cavities. 3. Disease of the sphenoid sinus or posterior ethmoid cells when it may be necessary to remove the middle turbinate in order to facilitate the treatment of these cavities.

Among the conditions regarding the treatment of which there is considerable difference of opinion may be mentioned: 1. Pressure between the middle turbinate and some of the surrounding structures, especially when associated with headache or pain in the eyes not otherwise accounted for. 2. A persistently red and inflamed or hypertrophied turbinate, especially when the other parts of the nasal cavity appear normal. This condition is frequently associated with the same class of head and eye symptoms. 3. A large and inflamed turbinate, probably of the bullous variety without reflex symptoms. 4. The persistent appearance of a purulent or mucopurulent discharge under the turbinate the source of which cannot be located. 5. When the turbinate is pressed upon by a small circumscribed deflection of the septum with plenty of room below for the passage of air. 6. A sensation of nasal obstruction when there is plenty of breathing-space below but the middle turbinate occludes the upper air-passage. 7. Atrophic rhinitis affecting the lower part of the nose with an enlarged and inflamed middle turbinate.

In the older text-books, little space is given to the surgery of this body. In the later text-books and in recent journal articles, the subject has been very fully discussed. Of the instruments devised for the removal of the turbinate, Gruenwald's forceps is perhaps the best known. Holmes' scissors have been extensively used, but are thick and clumsy, especially for use in a narrow nose.

A number of operations on the middle turbinate other than turbinotomy and turbinectomy have been proposed. Cauterization has had its advocates, but it seems to have been almost abandoned. Crushing of the turbinate in the cystic variety has been tried, and while it may have relieved pressure in some cases, it has been followed by inflammatory conditions which later necessitated removal. At the present time the surgical aspect of these cases seems to have been narrowed down to the question of turbinectomy, turbinotomy or letting the turbinate alone.

Dr. Andrews demonstrated a chisel with a cutting edge between two guarded points, curved so as to follow the attachment of the turbinate while cutting, which he believes makes the turbinectomy much easier.

DISCUSSION.

DR. F. G. STUBBS: The middle turbinate is one of the most important structures in the nose. It is probable that it would come in for a greater share of operative interference if there was a more general recognition of the fact that the current inspired air may be obstructed more by enlargement of this structure than from enlargement of the inferior turbinated body. Whether the removal of the middle turbinate increases the liability to infection in the accessory sinuses is still an unsettled question. He doubts whether it acts as a protection to these sinuses. Dr. Stubbs has found the chisel devised by Andrews much more suitable for the removal of the middle turbinate than the older methods. In using the snare, he differs with Dr. Andrews in that he believes the best results are attainable, not by placing the loop of the snare above the anterior end, but by placing it on the inferior surface.

DR. GEO. E. SHAMBAUGH has not used the chisel devised by Dr. Andrews but believes that it will make the removal of the middle turbinate easier than by our older methods, although, as a rule, not much difficulty is encountered by the methods which we now use. He believes we can do less harm to a patient by removing the middle turbinate than by removing the inferior. In inflammation of the anterior group of accessory sinuses where the process persists, it is a great assistance to have the middle turbinate removed. He believes that in giving a list of indications for the removing of a structure like the middle turbinate such as Dr. Andrews has given in his paper, it is often advisable to point out the contra-indications. He believes that while it is advisable to remove the middle turbinate occasionally for each one of the indications suggested by Dr. Andrews, it is nevertheless true that in many cases presenting just these conditions the middle turbinate should not be removed. For example, the middle turbinate exists under a variety of different forms and a beginner in reading over a list of indications for its removal such as given in Dr. Andrews' paper might readily make the mistake of persuading himself that almost any turbinate presenting an ordinary anatomical variation should be subjected to an operation.

We are all aware that the country is being crowded just now with men whose preparation for practice in these special fields is not such as to make them capable judges of whether operations in the nose should or should not be done. Ofttimes about the only knowledge which some of these men seem to think it is necessary to acquire before undertaking special work is to become familiar with the different instruments that are used for operations in the nose, without any appreciation of the pathology of the various nasal diseases.

DR. C. M. ROBERTSON: The middle turbinate may be red and swollen in cases of polypi in the middle meatus without the turbinate itself being hypertrophied. He has been trying the effect of lavage of the maxillary sinuses in cases of persistent swelling of the middle turbinate and has found the result very satisfactory, indicating that a diseased condition of the maxillary sinuses causes the swelling of the turbinate. Where the bulla ethmoidalis is enlarged, this should be broken down before operation upon the turbinate. Where the middle turbinate touches the inferior, the removal of a strip along the lower border is sufficient. One should always aim to save as much of the turbinate as possible. This instrument presented by Dr. Andrews will not be serviceable in all cases. Dr. Robinson has seen cases where the size of the bullous enlargement would make it impossible to use the chisel. He has seen cases where the cystic degeneration of this body has progressed until enclosed sacs were formed between the lateral wall and this body.

Dr. Sluder, of St. Louis, has designed a knife which can be slipped under the turbinate and cuts the turbinate off by pulling it forward.

DR. R. H. GOOD cautioned against pressing downward when cutting off the middle turbinate-body with Andrews' chisel, except where it is desired to remove the entire body.

DR. J. R. FLETCHER was pleased to hear the word of caution by Dr. Shambaugh regarding the removal of the turbinates. The physiological importance of these structures can be surmised when we remember that in twenty-four hours they furnish one-half liter of water to moisten the inspired air. The indications given by Dr. Andrews are doubtless correct, but we must be certain that the symptoms exist which warrant the removal of this body when these conditions are present.

He recalled a case where the inferior turbinate was much too large, causing an obstruction to the inspired air. This condition has adjusted itself, which shows that it was in a large measure a vaso-motor disturbance. He thinks it is immaterial whether we operate with a snare-loop placed above or below, as it can be successfully removed either way. The important thing to remember is that we may cause permanent injury by removing too much of these structures. Rhinitis sicca often develops a year or two after removal of the middle turbinate.

DR. ANDREWS, closing, stated that he had no doubt that the middle turbinate has the function of preventing infection of the accessory sinuses, and that in cases where the removal of the middle turbinate was followed later by disease of the antrum that the antrum trouble was the result of lack of protection. He has found polypi extending from diseased cavities in the turbinate body. It is impossible to determine what polypi found in the middle meatus comes from the turbinate itself and what from the lateral wall of the meatus. He believes that a considerable proportion comes from the turbinate body. He has never seen a middle turbinate on a cadaver or on the living that he was unable to remove with his chisel.

Are Diseases of the Middle-Ear Always Dependent on Nasopharyngeal Disturbance? By H. GRADLE, M. D.

DISCUSSION.

GEO. E. SHAMBAUGH: The point of view advanced by Dr. Gradle has much in its favor. Inflammatory conditions of the middle-ear resemble closely similar involvements of the nasal accessory sinuses. Infection of these sinuses almost without exception have their origin in intra-nasal diseases and the same also is true for disease of the middle-ear. Granting that inflammatory diseases of the middle-ear have their origin in conditions in the naso-pharynx, another question of great importance presents itself; this is the question of how far we may expect to be able to improve diseases of the middle-ear by looking after abnormal conditions in the nose and throat. As Dr. Gradle has well expressed it, intra-nasal surgery has received one of its greatest stimuli from the otologist. The otologist, recognizing the fact that middle-ear diseases have originated in the naso-pharynx has been in the habit of referring his cases to the rhinologist with the request to correct any abnormal conditions found in these parts. The rhinologist has often been led to proceed with the removal of any anatomical variation that

may be found in the nose in the hope that this may influence the middle-ear condition. This has unquestionably led to a very large amount of unnecessary work in the nose and throat, with the mistaken impression that chronic middle-ear conditions could in this way be improved. A more correct view of the situation in chronic adhesive middle-ear catarrh can be gained perhaps by comparing this situation with that arising from chronic suppurative otitis media. In the latter case we are quite willing to admit that the suppuration was originally the result of an extension from disease of the naso-pharynx. No one would expect to improve the defect in the hearing in a case of chronic suppuration by operations upon the nose or throat.

Cases of chronic tubo-tympanic catarrh often have their origin in the same kind of an acute process that starts the suppuration of the middle-ear. The discovery in these cases, later in life, of anatomical variations in the nose, such as a deviation of the septum, should not lead us to hold this responsible for the middle-ear condition, nor have we any right to expect that the correction of these anatomical variations would influence in any way the middle-ear process. Entirely too much stress has been put on the supposed relation existing between conditions in the nose, such as here referred to, and chronic middle-ear processes. If we find in the examination of an ear-case a nasal obstruction which is actually interfering with the proper nasal respiration, it is, of course, our duty to advise to have this corrected; not, however, for the improvement of the ear. It is doubtful whether any of these intranasal operations influence in any way the progress of a chronic middle-ear condition.

Some Remarks on Deaf-Mutism. E. W. SCRIPTURE, *Med. Record*, July 23, 1910.

An earnest and timely appeal to teach the partially deaf and deaf-mutes the art of speech. The inability to speak is the result of deafness and not of any defect in the speech mechanism. The author describes the form of exercises used in the best schools in educating the deaf-mutes. Illustrations show position of the tongue. When deafness is acquired after the person has learned to speak. The teaching of lip-reading should begin at once. The voice then retains its natural character.

LEDERMAN.

BOOK REVIEWS.

Etiological Relation of the Nose and the Genital Organs. Also a Treatise on Nerve-Physiology. (Über den ursaechlichen Zusammenhang von Nase und Geschlechtsorgan. Zugleich ein Beitrag zur Nervenphysiologie.

By WILHELM FLIESS. Second edition, revised and enlarged. Halle, A. S., 1910; Carl Marhold. Pp. 60. Price, M. 1.50.

The biologic, philosophic problems advanced by Fliess in this interesting monograph adapt themselves well to the etiologic relations between the nose and the genital organs. It is interesting reading but of not much practical significance.

Asthma and its Treatment. (Über Asthma und seine Behandlung.)

By M. SAENGER, M. D., Magdeburg. Berlin, 1910; S. Karger, Karlstrasse 16. Pp. 82. Price M. 1.50.

There is such a diversity of opinion concerning asthma, its origin and treatment that the monograph of Saenger appears rather timely.

In recent years many observers have reached the conclusion that the percentage of cases of asthma have a distinct psychic component and that this should be especially emphasized in the treatment of the patient. Saenger has also this opinion of the psychic element in asthma and holds that intense disturbance of respiration may be present without deeper organic changes, due principally to psychic influences.

The essential treatment is to instruct the asthmatic concerning the proper method of breathing, in addition to such general treatment as each case may indicate. The opinions of Saenger are logical and rational in their recommendations and conclusions and the treatment which he advocates is worthy of careful consideration, even though it requires much patience.

The author does not lay as much stress on the relation of nasal obstruction and nasal reflexes to asthma as perhaps most recent writers do, and seems to neglect this feature of therapy. It is a monograph well worthy of careful study.

Text-book on Otology. (Lehrbuch der Ohrenheilkunde).

By VICTOR URBANTSCHITSCH, Professor of Otology at the Vienna University. Fifth edition, thoroughly revised and enlarged. With 155 illustrations in the text. Berlin and Vienna: Urban and Schwarzenberg. 1910. Pp. 623. Price, 18 M.

The fifth edition of this text-book on otology by the present head of the Vienna school reflects the unusual progress of this specialty in the past decade.

Among the special chapters not usually found in other text-books we should mention especially the achievements of the author in acoustic exercises in the training of the deaf and semi-deaf. The valuable experiences of Urbantschitsch during the past twenty years in this field have been crystallized in an interesting and important chapter.

In another chapter the author emphasizes the importance of X-ray examination of the mastoid for diagnostic purposes; the functional tests of hearing are very extensively considered and all the recent labyrinthine differential tests are minutely described. In fact, the physiology and pathology of

the labyrinth forms one of the most valuable sections of this edition. Many of the original investigations carried out by the author and published in various medical journals and monographs during the past two decades, are incorporated in this treatise and special mention is made of the electric therapeutic applications and the use of the Eustachian bougie, of which Urhantschitsch is a constant and enthusiastic advocate.

The bibliographical references are especially valuable and complete, but we are sorry to see that the marginal notes added in the early editions have now been abandoned.

It is a splendid text-book and we should be glad to see an English translation of it, so that it may be more accessible to our American colleagues.

A Manual on Diseases of the Nose, Throat and Ear.

By E. BALDWIN GLEASON, M. D., Professor of Otology at the Medico-Chirurgical College, Philadelphia. Second revised edition, profusely illustrated. Philadelphia and London, 1910: W. B. Saunders Company, Canadian Agents: J. F. Hartz Co., Limited, Toronto. Pp. 563. Flexible leather cover, \$2.50.

We have no hesitation in endorsing this handy manual of diseases of the nose, throat and ear, as one of the most useful, practical and concise as yet published in English. It contains almost all of the facts in this field of service important to the student and practitioner interested in these specialties and many useful suggestions for the worker in otology and laryngology. We can add no more to this unconditional commendation in this age of prolific book-making, which affects otology and laryngology as intimately as it does the other specialties.

Diseases of the Nose and Throat.

By HERBERT TILLEY, B. S., F. R. C. S., Surgeon to the Ear and Throat Department, University College Hospital, London. Third edition, with 126 illustrations. London, 1910: H. H. Lewis, 136 Gower street. Pp. xiii-539. Price, 14s. net.

The third edition of this manual from the pen of our able and esteemed British confrère has grown to rather voluminous proportions and reflects much of the active practical experience of the author in its 540 concisely presented, well illustrated pages.

The chapters have all been thoroughly revised and those dealing with diseases of the nose and its accessory cavities have been almost entirely rewritten.

The characteristic feature of this book is one which should be the aim of every author in science, viz.: personal experience and individual opinion.

The Ear and its Diseases.

By ALBERT A. GRAY, M. D., Laureate of the Lenox Prize in Otology, International Medical Congress, 1909, Fellow of the Royal Society of Edinburgh, etc. With stereoscope and 123 illustrations, of which 37 are stereoscopic. New York: William Wood & Co., 1910. Pp. xii+386. Price, \$4.25.

Dr. Gray presents in clear and concise form a handy manual of otology, thoroughly up-to-date, beautifully illustrated with half-tones and stereoscopic plates and many original cuts.

The general chapters in this compact volume which merit special mention are those on acoustics, anatomy, physiology, and methods and principles of investigation. The functional tests of hearing are excellently described and include the recent tests in the differential diagnosis of labyrinthine disease.

The volume is a *multum in parvo* of otology, free from all unnecessary

literature, containing valuable hints to students, general practitioners and specialists, original in its construction and in its illustration, and contains as an especially valuable feature, a series of stereoscopic illustrations for which the author has already won general commendation.

The only criticism that we should presume to make is concerning the chapters on mastoid surgery and we trust that in the next edition of this valuable book the author will develop the importance of these chapters to the dignified position and the advance in technic which the past decade has so thoroughly brought out. We can recommend this book as one of exceptional merit.

Hints for the General Practitioner in Rhinology and Laryngology.

By DR. JOHANN FEIN, Privat-dozent at the University of Vienna. Translated by J. BOWRING HORGAN, M. B., B. Ch., Late House Surgeon at the Hospital for Diseases of the Throat, Golden Square, London W. With forty figures in the text and two photographic plates. New York: Rehman Company, 1910. Pp. xvi-223. Price, \$1.50.

While the general practitioner is not expected to acquire an extensive knowledge in rhinology and laryngology, the author has collected in this handy volume of 230 pages, much interesting data and many valuable hints to assist him in properly advising the patient and to impress on him the importance of these specialties and the necessity for his active co-operation with the rhinologist and laryngologist for the benefit of the patient.

Such diseases as may be satisfactorily treated by the general practitioner are worked out in detail and described in a special section of the book; those which belong more directly within the domain of the specialist are considered in their more important essentials and the general practitioner is advised as to the time and place of the specialist's co-operation.

Nursing in Diseases of the Eye, Ear, Nose and Throat.

By THE COMMITTEE ON NURSES OF THE MANHATTAN EYE, EAR, NOSE AND THROAT HOSPITAL. Philadelphia and London: W. B. Saunders Co., 1910. Pp. 281. Price, \$1.50.

This work, prepared primarily as a text-book for the pupil-nurses of the Manhattan Eye, Ear, Nose, and Throat Hospital, is the joint effort of a group of men and a woman who stand at the head of their several departments in the medical and nursing world. As may be expected, the literary style is much superior to that of most books on nursing subjects.

The opening chapters, on nursing in general, cover much valuable though, perhaps, familiar ground within small compass.

The chapter on the management of troublesome children, evidently the fruit of much experience, is especially explicit and practical. The latter divisions of the book, giving the accepted methods of treating both medical and surgical eye, ear, nose, and throat cases, and clearly describing the nurse's duties in each case, should prove of value to many graduate nurses whose hospital training may have touched but lightly on these important subjects.

Treatise on Diseases of the Esophagus, (Traite des maladies de l'esophage.)

By DR. GUISEZ, in Charge of Oto-Rhino-Laryngological Clinic of the Hotel-Dieu, Paris. With 142 illustrations in the text. Paris, 1910: Baillière et Fils. Pp. 317. Price 14 fr.

Since the advent of endoscopic technic and the active participation of the laryngologist in this new and interesting field of study, the esophagus and its diseases has become a matter of added interest and many laryngologists have included esophagoscopy in their domain of endoscopic work. The introduction of the esophagoscope has made possible a much more definite

study of the mucous membrane of the esophagus throughout its entire length and has made it a much more exact science.

All these activities have made possible this specialization of work on the esophagus and the volume here presented by Guisez is the result of painstaking work, careful observation and the collection of valuable clinical data in this new field.

To the laryngologist this should be an additional stimulation to work, as it may be perhaps rightfully included in his newer and wider domain.

Guisez's valuable monograph is replete with practical suggestions and clinical experience in this field. The author attempts a new classification of diseases of the esophagus, based rather on the pathology of endoscopic findings than on the older clinical differentiation. The book merits careful perusal by all interested in this new field of work.

Direct Laryngoscopy, Bronchoscopy and Esophagoscopy. (Die direkte Laryngoskopie Bronchoskopie and Esophagoskopie.)

By DR. W. BRUENINGS, Private-docent at the University of Freiburg, i. Br.

With 87 illustrations in the text and 35 figures on 19 plates. Wiesbaden, 1910: J. J. Bergmann. Pp. 405. Price 14 M.

The laryngological profession is to be congratulated on the appearance of this hand-book of endoscopy from the pen of one of the most practical, ingenious and skillful workers in this field. Endoscopy is making such rapid strides, is being taken up so actively by laryngologists the world over, and is contributing so much that is new and original in laryngology, that treatises like that of Bruening are of the greatest possible value and help to the working laryngologist who is developing his technic and experience in this field.

This book is masterful as a scientific literary production, is absolutely indispensable to the laryngologist and with its stereoscopic plates and splendid bibliography is a great achievement of the publisher's art. No up-to-date laryngologist can afford to be without it.

VOLUMES RECEIVED.

Transaction of the German Laryngological Society, 1910.

Transactions of the Third Spanish Oto-Rhino-Laryngological Congress, 1910.

Transaction of the Twenty-second Annual Meeting of the American Laryngological Society, Washington, D. C., May 3, 4 and 5, 1910.

Report of the Oto-Rhino-Laryngological Clinic of the University of Rome. Under the Direction of Prof. Gherardo Ferreri. Vol. VII, 1909.

Transactions of the American Otological Society, Forty-third Annual Meeting, Hotel Arlington, Washington, D. C., May 3 and 4, 1910.

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